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Sequence Listing

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Fong, Sherman  
Gao, Wei-Qiang  
Gerber, Hanspeter  
Gerritsen, Mary E.  
Goddard, Audrey  
Godowski, Paul J.  
Grimaldi, J. Christopher  
Gurney, Austin L.  
Hillan, Kenneth J  
Kl javin, Ivar J.  
Kuo, Sophia S.  
Napier, Mary A.  
Pan, James;  
Paoni, Nicholas F.  
Roy, Margaret Ann  
Shelton, David L.  
Stewart, Timothy A.  
Tumas, Daniel  
Williams, P. Mickey  
Wood, William I.

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-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	50	55	60
Phe Phe Thr Gly Pro Met Ser Asp Phe Lys Asn Val Gly Leu Val	65	70	75
Phe Val Asn Ser Lys Arg Asp Arg Thr Lys Ala Val Leu Cys Met	80	85	90
Val Val Ala Gly Ala Ile Ala Ala Val Phe His Thr Leu Ile Ala	95	100	105
Tyr Ser Asp Leu Gly Tyr Tyr Ile Ile Asn Lys Leu His His Val	110	115	120
Asp Glu Ser Val Gly Ser Lys Thr Arg Arg Ala Phe Leu Tyr Leu	125	130	135
Ala Ala Phe Pro Phe Met Asp Ala Met Ala Trp Thr His Ala Gly	140	145	150
Ile Leu Leu Lys His Lys Tyr Ser Phe Leu Val Gly Cys Ala Ser	155	160	165
Ile Ser Asp Val Ile Ala Gln Val Val Phe Val Ala Ile Leu Leu	170	175	180
His Ser His Leu Glu Cys Arg Glu Pro Leu Leu Ile Pro Ile Leu	185	190	195
Ser Leu Tyr Met Gly Ala Leu Val Arg Cys Thr Thr Leu Cys Leu	200	205	210
Gly Tyr Tyr Lys Asn Ile His Asp Ile Ile Pro Asp Arg Ser Gly	215	220	225
Pro Glu Leu Gly Gly Asp Ala Thr Ile Arg Lys Met Leu Ser Phe	230	235	240
Trp Trp Pro Leu Ala Leu Ile Leu Ala Thr Gln Arg Ile Ser Arg	245	250	255
Pro Ile Val Asn Leu Phe Val Ser Arg Asp Leu Gly Gly Ser Ser	260	265	270
Ala Ala Thr Glu Ala Val Ala Ile Leu Thr Ala Thr Tyr Pro Val	275	280	285
Gly His Met Pro Tyr Gly Trp Leu Thr Glu Ile Arg Ala Val Tyr	290	295	300
Pro Ala Phe Asp Lys Asn Asn Pro Ser Asn Lys Leu Val Ser Thr	305	310	315
Ser Asn Thr Val Thr Ala Ala His Ile Lys Lys Phe Thr Phe Val	320	325	330
Cys Met Ala Leu Ser Leu Thr Leu Cys Phe Val Met Phe Trp Thr	335	340	345

Pro Asn Val Ser Glu Lys Ile Leu Ile Asp Ile Ile Gly Val Asp  
350 355 360

Phe Ala Phe Ala Glu Leu Cys Val Val Pro Leu Arg Ile Phe Ser  
365 370 375

Phe Phe Pro Val Pro Val Thr Val Arg Ala His Leu Thr Gly Trp  
380 385 390

Leu Met Thr Leu Lys Lys Thr Phe Val Leu Ala Pro Ser Ser Val  
395 400 405

Leu Arg Ile Ile Val Leu Ile Ala Ser Leu Val Val Leu Pro Tyr  
410 415 420

Leu Gly Val His Gly Ala Thr Leu Gly Val Gly Ser Leu Leu Ala  
425 430 435

Gly Phe Val Gly Glu Ser Thr Met Val Ala Ile Ala Ala Cys Tyr  
440 445 450

Val Tyr Arg Lys Gln Lys Lys Lys Met Glu Asn Glu Ser Ala Thr  
455 460 465

Glu Gly Glu Asp Ser Ala Met Thr Asp Met Pro Pro Thr Glu Glu  
470 475 480

Val Thr Asp Ile Val Glu Met Arg Glu Glu Asn Glu  
485 490

<210> 8  
<211> 535  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 33, 66, 96, 387  
<223> unknown base

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cggcctattg tcaacctctt tgtttcccgg gaccttggtg gcagttctgc 150  
agccacagag gcagtggcga ttttgacagc cacataccct gtgggtcaca 200  
tgccatacgg ctggttgacg gaaatccgtg ctgtgtatcc tgctttcgac 250  
aagaataacc ccagcaacaa actggtgagc acgagcaaca cagtcacggc 300  
ggccacatc aagaagttca ccttcgtctg catggctctg tcaactcacgc 350  
tctgtttcgt gatgttttgg acacccaacg tgtctgngaa aatcttgata 400  
gacatcatcg gagtggactt tgcctttgca gaactctgtg ttgttccttt 450

gcggatcttc tccttcttcc cagttccagt cacagtgagg gcgcatctca 500

ccgggtggct gatgacactg aagaaaacct tcgtc 535

<210> 9

<211> 434

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 32, 54, 80, 111, 117, 122, 139, 193, 205, 221, 226, 228, 273,  
293, 296, 305, 336, 358, 361

<223> unknown base

<400> 9

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caanaaattg gggagcaggg caaaacagtn acgggcagcc cacatcaaga 100

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gttttgagaca cccaaagtgt ttgagaaaat tttgatagac atnatcggag 200

tggantttgc ctttgagaa ntttgnngtg ttcctttgcg gattttctcc 250

tttttcccag ttccagtcac agngagggcg catctcaccg ggnggntgat 300

gacantgaag aaaacctttg tccttgcccc cagctntttg gtgcggatca 350

ttgtcctnat ngccagcctt gtggctctac cctacctggg ggtgcacggt 400

gcgaccctgg gcgtgggttc cctcctggcg ggca 434

<210> 10

<211> 154

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 33, 49, 68, 83, 90, 98, 119

<223> unknown base

<400> 10

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agac 154

<210> 11

<211> 24

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 11  
ctgatccggt tcttggtgcc cctg 24

<210> 12  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 12  
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<210> 13  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
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<400> 13  
tcattctcttc cctctccc 18

<210> 14  
<211> 18  
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<213> Artificial Sequence

<220>  
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<400> 14  
ccttccgcca cggagttc 18

<210> 15  
<211> 24  
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<220>  
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<400> 15  
ggcaaagtcc actccgatga tgtc 24

<210> 16  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
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<400> 16  
gcctgctgtg gtcacaggtc tccg 24

<210> 17  
<211> 45  
<212> DNA  
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<220>  
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<400> 17  
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<210> 18  
<211> 1901  
<212> DNA  
<213> Homo sapiens

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ctctgcccc tgcacacctgt gcagctgctg ccccgccagc cgcaactcca 150  
ccgtgagccg cctcatcttc acgttcttcc tcttcctggg ggtgctggtg 200  
tccatcatta tgctgagccc gggcgtggag agtcagctct acaagctgcc 250  
ctgggtgtgt gaggaggggg ccgggatccc caccgtcctg cagggccaca 300  
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ttaagttcct gatcctggtg ggcctcaccg tgggtgcctt ctacatccct 500  
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ccctatccag tatccctgaa cagaaatgca accccattt gcccaaccag 950



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 gcaggtggca gcctgtgagg gccgggcctt tgacaacgag caggacggcg 1200  
 tcacctacag ctactccttc ttccacttct gcctggtgct ggcctcactg 1250  
 cacgtcatga tgacgctcac caactggtac aagcccgggtg agacccggaa 1300  
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a 1901

<210> 19

<211> 457

<212> PRT

<213> Homo sapiens

<400> 19

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Cys	Leu	Cys	Gly	Ser	Ala	Pro	Cys	Ile	Leu	Cys	Ser	Cys	Cys	Pro
				20					25					30

Ala	Ser	Arg	Asn	Ser	Thr	Val	Ser	Arg	Leu	Ile	Phe	Thr	Phe	Phe
				35					40					45

Leu	Phe	Leu	Gly	Val	Leu	Val	Ser	Ile	Ile	Met	Leu	Ser	Pro	Gly
				50					55					60

Val	Glu	Ser	Gln	Leu 65	Tyr	Lys	Leu	Pro	Trp 70	Val	Cys	Glu	Glu	Gly 75
Ala	Gly	Ile	Pro	Thr 80	Val	Leu	Gln	Gly	His 85	Ile	Asp	Cys	Gly	Ser 90
Leu	Leu	Gly	Tyr	Arg 95	Ala	Val	Tyr	Arg	Met 100	Cys	Phe	Ala	Thr	Ala 105
Ala	Phe	Phe	Phe	Phe 110	Phe	Phe	Thr	Leu	Leu 115	Met	Leu	Cys	Val	Ser 120
Ser	Ser	Arg	Asp	Pro 125	Arg	Ala	Ala	Ile	Gln 130	Asn	Gly	Phe	Trp	Phe 135
Phe	Lys	Phe	Leu	Ile 140	Leu	Val	Gly	Leu	Thr 145	Val	Gly	Ala	Phe	Tyr 150
Ile	Pro	Asp	Gly	Ser 155	Phe	Thr	Asn	Ile	Trp 160	Phe	Tyr	Phe	Gly	Val 165
Val	Gly	Ser	Phe	Leu 170	Phe	Ile	Leu	Ile	Gln 175	Leu	Val	Leu	Leu	Ile 180
Asp	Phe	Ala	His	Ser 185	Trp	Asn	Gln	Arg	Trp 190	Leu	Gly	Lys	Ala	Glu 195
Glu	Cys	Asp	Ser	Arg 200	Ala	Trp	Tyr	Ala	Gly 205	Leu	Phe	Phe	Phe	Thr 210
Leu	Leu	Phe	Tyr	Leu 215	Leu	Ser	Ile	Ala	Ala 220	Val	Ala	Leu	Met	Phe 225
Met	Tyr	Tyr	Thr	Glu 230	Pro	Ser	Gly	Cys	His 235	Glu	Gly	Lys	Val	Phe 240
Ile	Ser	Leu	Asn	Leu 245	Thr	Phe	Cys	Val	Cys 250	Val	Ser	Ile	Ala	Ala 255
Val	Leu	Pro	Lys	Val 260	Gln	Asp	Ala	Gln	Pro 265	Asn	Ser	Gly	Leu	Leu 270
Gln	Ala	Ser	Val	Ile 275	Thr	Leu	Tyr	Thr	Met 280	Phe	Val	Thr	Trp	Ser 285
Ala	Leu	Ser	Ser	Ile 290	Pro	Glu	Gln	Lys	Cys 295	Asn	Pro	His	Leu	Pro 300
Thr	Gln	Leu	Gly	Asn 305	Glu	Thr	Val	Val	Ala 310	Gly	Pro	Glu	Gly	Tyr 315
Glu	Thr	Gln	Trp	Trp 320	Asp	Ala	Pro	Ser	Ile 325	Val	Gly	Leu	Ile	Ile 330
Phe	Leu	Leu	Cys	Thr 335	Leu	Phe	Ile	Ser	Leu 340	Arg	Ser	Ser	Asp	His 345
Arg	Gln	Val	Asn	Ser	Leu	Met	Gln	Thr	Glu	Glu	Cys	Pro	Pro	Met

	350		355		360
Leu Asp Ala Thr	Gln Gln Gln Gln Gln Gln	Val Ala Ala Cys Glu			
	365		370		375
Gly Arg Ala Phe	Asp Asn Glu Gln Asp	Gly Val Thr Tyr Ser Tyr			
	380		385		390
Ser Phe Phe His	Phe Cys Leu Val Leu	Ala Ser Leu His Val Met			
	395		400		405
Met Thr Leu Thr	Asn Trp Tyr Lys Pro	Gly Glu Thr Arg Lys Met			
	410		415		420
Ile Ser Thr Trp	Thr Ala Val Trp Val	Lys Ile Cys Ala Ser Trp			
	425		430		435
Ala Gly Leu Leu	Leu Tyr Leu Trp Thr	Leu Val Ala Pro Leu Leu			
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Leu Arg Asn Arg	Asp Phe Ser				
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<210> 20
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 20
gccgcctcat cttcacgttc ttcc 24

<210> 21
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 21
tcatccagct ggtgctgctc 20

<210> 22
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 22
cttcttccac ttctgcctgg 20

<210> 23
<211> 18

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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 23  
cctgggcaaa aatgcaac 18

<210> 24  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 24  
caggaatgta gaaggcacc acgg 24

<210> 25  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 25  
tggcacagat cttcacccac acgg 24

<210> 26  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 26  
tgtccatcat tatgctgagc ccgggcgtgg agagtcagct ctacaagctg 50

<210> 27  
<211> 1351  
<212> DNA  
<213> Homo sapiens

<400> 27  
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cgcggcacgt ccgcgaggac ttgaagtcct gagcgctcaa gtttgtccgt 150  
aggtcgagag aaggccatgg aggtgccgcc accggcaccg cggagctttc 200  
tctgtagagc attgtgccta tttccccgag tctttgctgc cgaagctgtg 250

actgccgatt cggaagtcct tgaggagcgt cagaagcggc ttccctacgt 300  
 cccagagccc tattaccgga aatctggatg ggaccgcctc cgggagctgt 350  
 ttggcaaaga tgaacagcag agaatttcaa aggaccttgc taatatctgt 400  
 aagacggcag ctacagcagg catcattggc tgggtgtatg ggggaatacc 450  
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 ttaatctatc aatatatgca tacatggata tatccacca cctagatttt 1300  
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<210> 28  
 <211> 285  
 <212> PRT  
 <213> Homo sapiens

<400> 28  
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 1 5 10 15  
 Leu Cys Leu Phe Pro Arg Val Phe Ala Ala Glu Ala Val Thr Ala  
 20 25 30

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				35					40					45	
Pro	Glu	Pro	Tyr	Tyr	Pro	Glu	Ser	Gly	Trp	Asp	Arg	Leu	Arg	Glu	
				50					55					60	
Leu	Phe	Gly	Lys	Asp	Glu	Gln	Gln	Arg	Ile	Ser	Lys	Asp	Leu	Ala	
				65					70					75	
Asn	Ile	Cys	Lys	Thr	Ala	Ala	Thr	Ala	Gly	Ile	Ile	Gly	Trp	Val	
				80					85					90	
Tyr	Gly	Gly	Ile	Pro	Ala	Phe	Ile	His	Ala	Lys	Gln	Gln	Tyr	Ile	
				95					100					105	
Glu	Gln	Ser	Gln	Ala	Glu	Ile	Tyr	His	Asn	Arg	Phe	Asp	Ala	Val	
				110					115					120	
Gln	Ser	Ala	His	Arg	Ala	Ala	Thr	Arg	Gly	Phe	Ile	Arg	Tyr	Gly	
				125					130					135	
Trp	Arg	Trp	Gly	Trp	Arg	Thr	Ala	Val	Phe	Val	Thr	Ile	Phe	Asn	
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Thr	Val	Asn	Thr	Ser	Leu	Asn	Val	Tyr	Arg	Asn	Lys	Asp	Ala	Leu	
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Ser	His	Phe	Val	Ile	Ala	Gly	Ala	Val	Thr	Gly	Ser	Leu	Phe	Arg	
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Ile	Asn	Val	Gly	Leu	Arg	Gly	Leu	Val	Ala	Gly	Gly	Ile	Ile	Gly	
				185					190					195	
Ala	Leu	Leu	Gly	Thr	Pro	Val	Gly	Gly	Leu	Leu	Met	Ala	Phe	Gln	
				200					205					210	
Lys	Tyr	Ala	Gly	Glu	Thr	Val	Gln	Glu	Arg	Lys	Gln	Lys	Asp	Arg	
				215					220					225	
Lys	Ala	Leu	His	Glu	Leu	Lys	Leu	Glu	Glu	Trp	Lys	Gly	Arg	Leu	
				230					235					240	
Gln	Val	Thr	Glu	His	Leu	Pro	Glu	Lys	Ile	Glu	Ser	Ser	Leu	Arg	
				245					250					255	
Glu	Asp	Glu	Pro	Glu	Asn	Asp	Ala	Lys	Lys	Ile	Glu	Ala	Leu	Leu	
				260					265					270	
Asn	Leu	Pro	Arg	Asn	Pro	Ser	Val	Ile	Asp	Lys	Gln	Asp	Lys	Asp	
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<210> 29  
 <211> 324  
 <212> DNA  
 <213> Homo sapiens

<400> 29  
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 tgaacagcag agaatttcaa aggaccttgc taatatctgt aagacggcag 150  
 ctacagcagg catcattggc tgggtgtatg ggggaatacc agcttttatt 200  
 catgctaaac aacaatacat tgagcagagc caggcagaaa tttatcataa 250  
 ccggtttgat gctgtgcaat ctgcacatcg tgctgccaca cgaggcttca 300  
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<210> 30  
 <211> 377  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 262, 330, 371  
 <223> unknown base

<400> 30  
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 agagccaggc agaaatttat nataacc 377

<210> 31  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 31  
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<210> 32  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 32  
cttgaggagc gtcagaagcg 20

<210> 33  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 33  
ataacgaatg aagcctcgtg 20

<210> 34  
<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 34  
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<210> 35  
<211> 1819  
<212> DNA  
<213> Homo sapiens

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ccacccacgt ctgcgttgct gccccgcctg ggccaggccc caaaggcaag 100  
gacaaagcag ctgtcaggga acctccgccg gagtcgaatt tacgtgcagc 150  
tgccggcaac cacaggttcc aagatggttt gcgggggctt cgcgtgttcc 200  
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 taaaagaaag taatggaag 1819

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 <211> 204  
 <212> PRT  
 <213> Homo sapiens

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 20 25 30

Ala Ala Trp Gly Ile Gly Phe Gly Leu Ile Ser Ser Leu Arg Val  
35 40 45

Val Gly Val Val Ile Ala Val Gly Ile Phe Leu Phe Leu Ile Ala  
50 55 60

Leu Val Gly Leu Ile Gly Ala Val Lys His His Gln Val Leu Leu  
65 70 75

Phe Phe Tyr Met Ile Ile Leu Leu Leu Val Phe Ile Val Gln Phe  
80 85 90

Ser Val Ser Cys Ala Cys Leu Ala Leu Asn Gln Glu Gln Gln Gly  
95 100 105

Gln Leu Leu Glu Val Gly Trp Asn Asn Thr Ala Ser Ala Arg Asn  
110 115 120

Asp Ile Gln Arg Asn Leu Asn Cys Cys Gly Phe Arg Ser Val Asn  
125 130 135

Pro Asn Asp Thr Cys Leu Ala Ser Cys Val Lys Ser Asp His Ser  
140 145 150

Cys Ser Pro Cys Ala Pro Ile Ile Gly Glu Tyr Ala Gly Glu Val  
155 160 165

Leu Arg Phe Val Gly Gly Ile Gly Leu Phe Phe Ser Phe Thr Glu  
170 175 180

Ile Leu Gly Val Trp Leu Thr Tyr Arg Tyr Arg Asn Gln Lys Asp  
185 190 195

Pro Arg Ala Asn Pro Ser Ala Phe Leu  
200

<210> 37  
<211> 390  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 20, 35, 61, 83, 106, 130, 133, 187, 232, 260, 336  
<223> unknown base

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tattctgtaa nttgtattta ttgttcagtt ttntgtatct tgcgcttggt 100  
tagccontgaa ccaggagcaa cagggtcagn ttntggaggt tggttggaac 150  
aatacggcaa gtgctcgaaa tgacatccag agaaatntaa actgctgtgg 200  
gttccgaagt gttaacccaa atgacacctg tntggctagc tgtgttaaaa 250  
gtgaccactn gtgctcgcca tgtgctccaa tcataggaga atatgctgga 300

gaggttttga gatttggttg tggcattggc ctgttnttca gttttacaga 350

gatcctgggt gtttggctga cctacagata caggaaccag 390

<210> 38

<211> 566

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 27

<223> unknown base

<400> 38

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ttacaccaat gtattctaga atagtattgt cttaggaaat tgtggtttaa 150

tttttgactt ttacaggtaa gtgcaaagga gaagtggttt catgaaatgt 200

tctaattgtat aataacattt accttcagcc tcccatcaga atggaacgag 250

ttttgagtaa tccaggaagt atatctatat gatcttgata ttgttttata 300

taatttgaag tctaaaagac tgcattttta aacaagttag tattaatgcg 350

ttggcccacg tagcaaaaag atatttgatt atcttaaaaa ttgttaaata 400

ccgttttcat gaaagttctc agtattgtaa cagcaacttg tcaaacctaa 450

gcatatttga atatgatctc ccataatttg aaattgaaat cgtattgtgt 500

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gttgtgcccc acttgc 566

<210> 39

<211> 264

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 84-85, 206

<223> unknown base

<400> 39

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tggttggtcaa caatcacggc caagtgactc cgcaaatac atcccagaga 150

aatcctaaac tgctgtgggt tccgaagtgt taaccctaat gacacgtgtc 200

tggctngctg tggtaaaagt gaccactcgt gctcgccatg tgctccaatc 250

ataggagaat atgc 264

<210> 40

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 40

accacgtct gcgttgctgc c 21

<210> 41

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 41

gagaatatgc tggagagg 18

<210> 42

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 42

aggaatgcac taggattcgc gcgg 24

<210> 43

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 43

ggcccaaaag gcaaggacaa agcagctgtc agggaaacctc cgccg 45

<210> 44

<211> 2061

<212> DNA

<213> Homo sapiens

<400> 44

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gacgctgcag tgtgagggac ctgtctgcac tgaggagagc agctgccaca 150  
 cggaggatga cttgactgat gcaaggggaag ctggcttcca ggtcaaggcc 200  
 tacactttca gtgaaccctt ccacctgatt gtgtcctatg actggctgat 250  
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 cttcctgtcc tgcacatatg cataagtact tttaacaagt gtcccagtgt 1200  
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 ttgtagccta a 2061

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 <211> 359  
 <212> PRT  
 <213> Homo sapiens

<400> 45  
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 Glu Thr Leu Gln Cys Glu Gly Pro Val Cys Thr Glu Glu Ser Ser  
 35 40 45  
 Cys His Thr Glu Asp Asp Leu Thr Asp Ala Arg Glu Ala Gly Phe  
 50 55 60  
 Gln Val Lys Ala Tyr Thr Phe Ser Glu Pro Phe His Leu Ile Val  
 65 70 75  
 Ser Tyr Asp Trp Leu Ile Leu Gln Gly Pro Ala Lys Pro Val Phe  
 80 85 90  
 Glu Gly Asp Leu Leu Val Leu Arg Cys Gln Ala Trp Gln Asp Trp  
 95 100 105  
 Pro Leu Thr Gln Val Thr Phe Tyr Arg Asp Gly Ser Ala Leu Gly  
 110 115 120  
 Pro Pro Gly Pro Asn Arg Glu Phe Ser Ile Thr Val Val Gln Lys  
 125 130 135  
 Ala Asp Ser Gly His Tyr His Cys Ser Gly Ile Phe Gln Ser Pro  
 140 145 150

Gly	Pro	Gly	Ile	Pro	Glu	Thr	Ala	Ser	Val	Val	Ala	Ile	Thr	Val	155	160	165
Gln	Glu	Leu	Phe	Pro	Ala	Pro	Ile	Leu	Arg	Ala	Val	Pro	Ser	Ala	170	175	180
Glu	Pro	Gln	Ala	Gly	Ser	Pro	Met	Thr	Leu	Ser	Cys	Gln	Thr	Lys	185	190	195
Leu	Pro	Leu	Gln	Arg	Ser	Ala	Ala	Arg	Leu	Leu	Phe	Ser	Phe	Tyr	200	205	210
Lys	Asp	Gly	Arg	Ile	Val	Gln	Ser	Arg	Gly	Leu	Ser	Ser	Glu	Phe	215	220	225
Gln	Ile	Pro	Thr	Ala	Ser	Glu	Asp	His	Ser	Gly	Ser	Tyr	Trp	Cys	230	235	240
Glu	Ala	Ala	Thr	Glu	Asp	Asn	Gln	Val	Trp	Lys	Gln	Ser	Pro	Gln	245	250	255
Leu	Glu	Ile	Arg	Val	Gln	Gly	Ala	Ser	Ser	Ser	Ala	Ala	Pro	Pro	260	265	270
Thr	Leu	Asn	Pro	Ala	Pro	Gln	Lys	Ser	Ala	Ala	Pro	Gly	Thr	Ala	275	280	285
Pro	Glu	Glu	Ala	Pro	Gly	Pro	Leu	Pro	Pro	Pro	Pro	Thr	Pro	Ser	290	295	300
Ser	Glu	Asp	Pro	Gly	Phe	Ser	Ser	Pro	Leu	Gly	Met	Pro	Asp	Pro	305	310	315
His	Leu	Tyr	His	Gln	Met	Gly	Leu	Leu	Leu	Lys	His	Met	Gln	Asp	320	325	330
Val	Arg	Val	Leu	Leu	Gly	His	Leu	Leu	Met	Glu	Leu	Arg	Glu	Leu	335	340	345
Ser	Gly	His	Gln	Lys	Pro	Gly	Thr	Thr	Lys	Ala	Thr	Ala	Glu		350	355	

<210> 46

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 46

tgggctgtgt cctcatgg 18

<210> 47

<211> 18

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 47  
tttccagcgc caattctc 18

<210> 48  
<211> 23  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 48  
agttcttgga ctgtgatagc cac 23

<210> 49  
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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 49  
aaacttggtt gtcctcagtg gctg 24

<210> 50  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 50  
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<210> 51  
<211> 2181  
<212> DNA  
<213> Homo sapiens

<400> 51  
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ccaccagaag tttgagcctc tttggtagca ggaggctgga agaaaggaca 100  
gaagtagctc tggctgtgat ggggatctta ctgggcctgc tactcctggg 150  
gcacctaaca gtggacactt atggccgtcc catcctggaa gtgccagaga 200  
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 tgggtgctcaa taaatatcta atcataacag c 2181

<210> 52  
 <211> 321  
 <212> PRT  
 <213> Homo sapiens

<400> 52  
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 Asp Thr Tyr Gly Arg Pro Ile Leu Glu Val Pro Glu Ser Val Thr  
 20 25 30  
 Gly Pro Trp Lys Gly Asp Val Asn Leu Pro Cys Thr Tyr Asp Pro  
 35 40 45  
 Leu Gln Gly Tyr Thr Gln Val Leu Val Lys Trp Leu Val Gln Arg  
 50 55 60  
 Gly Ser Asp Pro Val Thr Ile Phe Leu Arg Asp Ser Ser Gly Asp  
 65 70 75  
 His Ile Gln Gln Ala Lys Tyr Gln Gly Arg Leu His Val Ser His  
 80 85 90  
 Lys Val Pro Gly Asp Val Ser Leu Gln Leu Ser Thr Leu Glu Met  
 95 100 105  
 Asp Asp Arg Ser His Tyr Thr Cys Glu Val Thr Trp Gln Thr Pro  
 110 115 120  
 Asp Gly Asn Gln Val Val Arg Asp Lys Ile Thr Glu Leu Arg Val  
 125 130 135  
 Gln Lys Leu Ser Val Ser Lys Pro Thr Val Thr Thr Gly Ser Gly  
 140 145 150  
 Tyr Gly Phe Thr Val Pro Gln Gly Met Arg Ile Ser Leu Gln Cys  
 155 160 165  
 Gln Ala Arg Gly Ser Pro Pro Ile Ser Tyr Ile Trp Tyr Lys Gln  
 170 175 180

Gln	Thr	Asn	Asn	Gln	Glu	Pro	Ile	Lys	Val	Ala	Thr	Leu	Ser	Thr	185	190	195
Leu	Leu	Phe	Lys	Pro	Ala	Val	Ile	Ala	Asp	Ser	Gly	Ser	Tyr	Phe	200	205	210
Cys	Thr	Ala	Lys	Gly	Gln	Val	Gly	Ser	Glu	Gln	His	Ser	Asp	Ile	215	220	225
Val	Lys	Phe	Val	Val	Lys	Asp	Ser	Ser	Lys	Leu	Leu	Lys	Thr	Lys	230	235	240
Thr	Glu	Ala	Pro	Thr	Thr	Met	Thr	Tyr	Pro	Leu	Lys	Ala	Thr	Ser	245	250	255
Thr	Val	Lys	Gln	Ser	Trp	Asp	Trp	Thr	Thr	Asp	Met	Asp	Gly	Tyr	260	265	270
Leu	Gly	Glu	Thr	Ser	Ala	Gly	Pro	Gly	Lys	Ser	Leu	Pro	Val	Phe	275	280	285
Ala	Ile	Ile	Leu	Ile	Ile	Ser	Leu	Cys	Cys	Met	Val	Val	Phe	Thr	290	295	300
Met	Ala	Tyr	Ile	Met	Leu	Cys	Arg	Lys	Thr	Ser	Gln	Gln	Glu	His	305	310	315
Val	Tyr	Glu	Ala	Ala	Arg										320		

<210> 53

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 53

tatccctcca attgagcacc ctgg 24

<210> 54

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 54

gtcgggaagac atcccaacaa g 21

<210> 55

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 55

cttcacaatg tcgctgtgct gctc 24

<210> 56

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 56

agccaaatcc agcagctggc ttac 24

<210> 57

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 57

tggatgaccg gagccactac acgtgtgaag tcacctggca gactcctgat 50

<210> 58

<211> 2458

<212> DNA

<213> Homo sapiens

<400> 58

gcgccgggag cccatctgcc cccaggggca cggggcgcg ggccggctcc 50

cgcccgccac atggctgcag ccacctcgcg cgcaccccga ggccgcccgc 100

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aatttcctgg caggagatgc ctcttgtag attgaacctc tgaagcccag 500

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gagttggaag gagagctgac agaaggaagt gacctgactt tgcagtgtga 650



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<210> 59  
 <211> 373  
 <212> PRT  
 <213> Homo sapiens

<400> 59  
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 35 40 45  
 Thr Leu Asp Ile Glu Trp Leu Leu Thr Asp Asn Glu Gly Asn Gln  
 50 55 60  
 Lys Val Val Ile Thr Tyr Ser Ser Arg His Val Tyr Asn Asn Leu  
 65 70 75  
 Thr Glu Glu Gln Lys Gly Arg Val Ala Phe Ala Ser Asn Phe Leu  
 80 85 90  
 Ala Gly Asp Ala Ser Leu Gln Ile Glu Pro Leu Lys Pro Ser Asp  
 95 100 105  
 Glu Gly Arg Tyr Thr Cys Lys Val Lys Asn Ser Gly Arg Tyr Val  
 110 115 120  
 Trp Ser His Val Ile Leu Lys Val Leu Val Arg Pro Ser Lys Pro  
 125 130 135  
 Lys Cys Glu Leu Glu Gly Glu Leu Thr Glu Gly Ser Asp Leu Thr  
 140 145 150  
 Leu Gln Cys Glu Ser Ser Ser Gly Thr Glu Pro Ile Val Tyr Tyr  
 155 160 165  
 Trp Gln Arg Ile Arg Glu Lys Glu Gly Glu Asp Glu Arg Leu Pro  
 170 175 180

Pro	Lys	Ser	Arg	Ile	Asp	Tyr	Asn	His	Pro	Gly	Arg	Val	Leu	Leu	185	190	195
Gln	Asn	Leu	Thr	Met	Ser	Tyr	Ser	Gly	Leu	Tyr	Gln	Cys	Thr	Ala	200	205	210
Gly	Asn	Glu	Ala	Gly	Lys	Glu	Ser	Cys	Val	Val	Arg	Val	Thr	Val	215	220	225
Gln	Tyr	Val	Gln	Ser	Ile	Gly	Met	Val	Ala	Gly	Ala	Val	Thr	Gly	230	235	240
Ile	Val	Ala	Gly	Ala	Leu	Leu	Ile	Phe	Leu	Leu	Val	Trp	Leu	Leu	245	250	255
Ile	Arg	Arg	Lys	Asp	Lys	Glu	Arg	Tyr	Glu	Glu	Glu	Glu	Arg	Pro	260	265	270
Asn	Glu	Ile	Arg	Glu	Asp	Ala	Glu	Ala	Pro	Lys	Ala	Arg	Leu	Val	275	280	285
Lys	Pro	Ser	Ser	Ser	Ser	Ser	Gly	Ser	Arg	Ser	Ser	Arg	Ser	Gly	290	295	300
Ser	Ser	Ser	Thr	Arg	Ser	Thr	Ala	Asn	Ser	Ala	Ser	Arg	Ser	Gln	305	310	315
Arg	Thr	Leu	Ser	Thr	Asp	Ala	Ala	Pro	Gln	Pro	Gly	Leu	Ala	Thr	320	325	330
Gln	Ala	Tyr	Ser	Leu	Val	Gly	Pro	Glu	Val	Arg	Gly	Ser	Glu	Pro	335	340	345
Lys	Lys	Val	His	His	Ala	Asn	Leu	Thr	Lys	Ala	Glu	Thr	Thr	Pro	350	355	360
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<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 60

ccagtgcaca gcaggcaacg aagc 24

<210> 61

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 61  
actaggctgt atgcctgggt gggc 24

<210> 62  
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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 62  
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<210> 63  
<211> 3534  
<212> DNA  
<213> Homo sapiens

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 <211> 655  
 <212> PRT  
 <213> Homo sapiens

<400> 64  
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 Arg Ile Ala Arg Arg Ala Thr Ala Thr Met Ile Ala Gly Ser Leu  
 20 25 30

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Lys	Ala	Ser	Asn	Leu	Ile	Gly	Thr	Tyr	Arg	His	Val	Asp	Arg	Ala	50	55	60
Thr	Gly	Gln	Val	Leu	Thr	Cys	Asp	Lys	Cys	Pro	Ala	Gly	Thr	Tyr	65	70	75
Val	Ser	Glu	His	Cys	Thr	Asn	Thr	Ser	Leu	Arg	Val	Cys	Ser	Ser	80	85	90
Cys	Pro	Val	Gly	Thr	Phe	Thr	Arg	His	Glu	Asn	Gly	Ile	Glu	Lys	95	100	105
Cys	His	Asp	Cys	Ser	Gln	Pro	Cys	Pro	Trp	Pro	Met	Ile	Glu	Lys	110	115	120
Leu	Pro	Cys	Ala	Ala	Leu	Thr	Asp	Arg	Glu	Cys	Thr	Cys	Pro	Pro	125	130	135
Gly	Met	Phe	Gln	Ser	Asn	Ala	Thr	Cys	Ala	Pro	His	Thr	Val	Cys	140	145	150
Pro	Val	Gly	Trp	Gly	Val	Arg	Lys	Lys	Gly	Thr	Glu	Thr	Glu	Asp	155	160	165
Val	Arg	Cys	Lys	Gln	Cys	Ala	Arg	Gly	Thr	Phe	Ser	Asp	Val	Pro	170	175	180
Ser	Ser	Val	Met	Lys	Cys	Lys	Ala	Tyr	Thr	Asp	Cys	Leu	Ser	Gln	185	190	195
Asn	Leu	Val	Val	Ile	Lys	Pro	Gly	Thr	Lys	Glu	Thr	Asp	Asn	Val	200	205	210
Cys	Gly	Thr	Leu	Pro	Ser	Phe	Ser	Ser	Ser	Thr	Ser	Pro	Ser	Pro	215	220	225
Gly	Thr	Ala	Ile	Phe	Pro	Arg	Pro	Glu	His	Met	Glu	Thr	His	Glu	230	235	240
Val	Pro	Ser	Ser	Thr	Tyr	Val	Pro	Lys	Gly	Met	Asn	Ser	Thr	Glu	245	250	255
Ser	Asn	Ser	Ser	Ala	Ser	Val	Arg	Pro	Lys	Val	Leu	Ser	Ser	Ile	260	265	270
Gln	Glu	Gly	Thr	Val	Pro	Asp	Asn	Thr	Ser	Ser	Ala	Arg	Gly	Lys	275	280	285
Glu	Asp	Val	Asn	Lys	Thr	Leu	Pro	Asn	Leu	Gln	Val	Val	Asn	His	290	295	300
Gln	Gln	Gly	Pro	His	His	Arg	His	Ile	Leu	Lys	Leu	Leu	Pro	Ser	305	310	315
Met	Glu	Ala	Thr	Gly	Gly	Glu	Lys	Ser	Ser	Thr	Pro	Ile	Lys	Gly			

320	325	330
Pro Lys Arg Gly His	Pro Arg Gln Asn Leu His Lys His Phe Asp	
335	340	345
Ile Asn Glu His Leu	Pro Trp Met Ile Val Leu Phe Leu Leu Leu	
350	355	360
Val Leu Val Val Ile	Val Val Cys Ser Ile Arg Lys Ser Ser Arg	
365	370	375
Thr Leu Lys Lys Gly	Pro Arg Gln Asp Pro Ser Ala Ile Val Glu	
380	385	390
Lys Ala Gly Leu Lys	Lys Ser Met Thr Pro Thr Gln Asn Arg Glu	
395	400	405
Lys Trp Ile Tyr Tyr	Cys Asn Gly His Gly Ile Asp Ile Leu Lys	
410	415	420
Leu Val Ala Ala Gln	Val Gly Ser Gln Trp Lys Asp Ile Tyr Gln	
425	430	435
Phe Leu Cys Asn Ala	Ser Glu Arg Glu Val Ala Ala Phe Ser Asn	
440	445	450
Gly Tyr Thr Ala Asp	His Glu Arg Ala Tyr Ala Ala Leu Gln His	
455	460	465
Trp Thr Ile Arg Gly	Pro Glu Ala Ser Leu Ala Gln Leu Ile Ser	
470	475	480
Ala Leu Arg Gln His	Arg Arg Asn Asp Val Val Glu Lys Ile Arg	
485	490	495
Gly Leu Met Glu Asp	Thr Thr Gln Leu Glu Thr Asp Lys Leu Ala	
500	505	510
Leu Pro Met Ser Pro	Ser Pro Leu Ser Pro Ser Pro Ile Pro Ser	
515	520	525
Pro Asn Ala Lys Leu	Glu Asn Ser Ala Leu Leu Thr Val Glu Pro	
530	535	540
Ser Pro Gln Asp Lys	Asn Lys Gly Phe Phe Val Asp Glu Ser Glu	
545	550	555
Pro Leu Leu Arg Cys	Asp Ser Thr Ser Ser Gly Ser Ser Ala Leu	
560	565	570
Ser Arg Asn Gly Ser	Phe Ile Thr Lys Glu Lys Lys Asp Thr Val	
575	580	585
Leu Arg Gln Val Arg	Leu Asp Pro Cys Asp Leu Gln Pro Ile Phe	
590	595	600
Asp Asp Met Leu His	Phe Leu Asn Pro Glu Glu Leu Arg Val Ile	
605	610	615

Glu Glu Ile Pro Gln Ala Glu Asp Lys Leu Asp Arg Leu Phe Glu  
620 625 630

Ile Ile Gly Val Lys Ser Gln Glu Ala Ser Gln Thr Leu Leu Asp  
635 640 645

Ser Val Tyr Ser His Leu Pro Asp Leu Leu  
650 655

<210> 65  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 65  
gtagcagtgc acatgggggtg ttgg 24

<210> 66  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 66  
accgcacatc ctcagtctct gtcc 24

<210> 67  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 67  
acgatgatcg cgggctccct tctcctgctt ggattcctta gcaccaccac 50

<210> 68  
<211> 2412  
<212> DNA  
<213> Homo sapiens

<400> 68  
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<210> 69  
 <211> 453  
 <212> PRT  
 <213> Homo sapiens

<400> 69  
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 Arg Ser Leu Phe Gly Leu Asp Asp Leu Lys Ile Ser Pro Val Ala  
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 35 40 45  
 Leu Lys Phe Phe Pro Ile Ile Val Ile Gly Ile Ile Ala Leu Ile  
 50 55 60  
 Leu Ala Leu Ala Ile Gly Leu Gly Ile His Phe Asp Cys Ser Gly  
 65 70 75  
 Lys Tyr Arg Cys Arg Ser Ser Phe Lys Cys Ile Glu Leu Ile Ala  
 80 85 90  
 Arg Cys Asp Gly Val Ser Asp Cys Lys Asp Gly Glu Asp Glu Tyr  
 95 100 105  
 Arg Cys Val Arg Val Gly Gly Gln Asn Ala Val Leu Gln Val Phe





Cys Gln Glu Arg Arg Leu Trp Lys Leu Val Gly Ala Thr Ser Phe  
410 415 420

Gly Ile Gly Cys Ala Glu Val Asn Lys Pro Gly Val Tyr Thr Arg  
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Val Thr Ser Phe Leu Asp Trp Ile His Glu Gln Met Glu Arg Asp  
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Leu Lys Thr

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<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 70  
tgacatcgcc cttatgaagc tggc 24

<210> 71  
<211> 24  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 71  
tacacgtccc tgtggttgca gatc 24

<210> 72  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 72  
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<210> 73  
<211> 3305  
<212> DNA  
<213> Homo sapiens

<400> 73  
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 gaaat 3305

<210> 74  
 <211> 735  
 <212> PRT  
 <213> Homo sapiens

<400> 74  
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 Ser Val Arg Ser Gly Asp Leu Trp Ile Pro Val Lys Ser Phe Asp  
 50 55 60  
 Ser Lys Asn His Pro Glu Val Leu Asn Ile Arg Leu Gln Arg Glu  
 65 70 75  
 Ser Lys Glu Leu Ile Ile Asn Leu Glu Arg Asn Glu Gly Leu Ile  
 80 85 90  
 Ala Ser Ser Phe Thr Glu Thr His Tyr Leu Gln Asp Gly Thr Asp  
 95 100 105  
 Val Ser Leu Ala Arg Asn Tyr Thr Gly His Cys Tyr Tyr His Gly  
 110 115 120  
 His Val Arg Gly Tyr Ser Asp Ser Ala Val Ser Leu Ser Thr Cys  
 125 130 135  
 Ser Gly Leu Arg Gly Leu Ile Val Phe Glu Asn Glu Ser Tyr Val  
 140 145 150  
 Leu Glu Pro Met Lys Ser Ala Thr Asn Arg Tyr Lys Leu Phe Pro  
 155 160 165  
 Ala Lys Lys Leu Lys Ser Val Arg Gly Ser Cys Gly Ser His His  
 170 175 180  
 Asn Thr Pro Asn Leu Ala Ala Lys Asn Val Phe Pro Pro Pro Ser  
 185 190 195  
 Gln Thr Trp Ala Arg Arg His Lys Arg Glu Thr Leu Lys Ala Thr  
 200 205 210

Lys	Tyr	Val	Glu	Leu	Val	Ile	Val	Ala	Asp	Asn	Arg	Glu	Phe	Gln	215	220	225
Arg	Gln	Gly	Lys	Asp	Leu	Glu	Lys	Val	Lys	Gln	Arg	Leu	Ile	Glu	230	235	240
Ile	Ala	Asn	His	Val	Asp	Lys	Phe	Tyr	Arg	Pro	Leu	Asn	Ile	Arg	245	250	255
Ile	Val	Leu	Val	Gly	Val	Glu	Val	Trp	Asn	Asp	Met	Asp	Lys	Cys	260	265	270
Ser	Val	Ser	Gln	Asp	Pro	Phe	Thr	Ser	Leu	His	Glu	Phe	Leu	Asp	275	280	285
Trp	Arg	Lys	Met	Lys	Leu	Leu	Pro	Arg	Lys	Ser	His	Asp	Asn	Ala	290	295	300
Gln	Leu	Val	Ser	Gly	Val	Tyr	Phe	Gln	Gly	Thr	Thr	Ile	Gly	Met	305	310	315
Ala	Pro	Ile	Met	Ser	Met	Cys	Thr	Ala	Asp	Gln	Ser	Gly	Gly	Ile	320	325	330
Val	Met	Asp	His	Ser	Asp	Asn	Pro	Leu	Gly	Ala	Ala	Val	Thr	Leu	335	340	345
Ala	His	Glu	Leu	Gly	His	Asn	Phe	Gly	Met	Asn	His	Asp	Thr	Leu	350	355	360
Asp	Arg	Gly	Cys	Ser	Cys	Gln	Met	Ala	Val	Glu	Lys	Gly	Gly	Cys	365	370	375
Ile	Met	Asn	Ala	Ser	Thr	Gly	Tyr	Pro	Phe	Pro	Met	Val	Phe	Ser	380	385	390
Ser	Cys	Ser	Arg	Lys	Asp	Leu	Glu	Thr	Ser	Leu	Glu	Lys	Gly	Met	395	400	405
Gly	Val	Cys	Leu	Phe	Asn	Leu	Pro	Glu	Val	Arg	Glu	Ser	Phe	Gly	410	415	420
Gly	Gln	Lys	Cys	Gly	Asn	Arg	Phe	Val	Glu	Glu	Gly	Glu	Glu	Cys	425	430	435
Asp	Cys	Gly	Glu	Pro	Glu	Glu	Cys	Met	Asn	Arg	Cys	Cys	Asn	Ala	440	445	450
Thr	Thr	Cys	Thr	Leu	Lys	Pro	Asp	Ala	Val	Cys	Ala	His	Gly	Leu	455	460	465
Cys	Cys	Glu	Asp	Cys	Gln	Leu	Lys	Pro	Ala	Gly	Thr	Ala	Cys	Arg	470	475	480
Asp	Ser	Ser	Asn	Ser	Cys	Asp	Leu	Pro	Glu	Phe	Cys	Thr	Gly	Ala	485	490	495
Ser	Pro	His	Cys	Pro	Ala	Asn	Val	Tyr	Leu	His	Asp	Gly	His	Ser			

500					505					510				
Cys	Gln	Asp	Val	Asp	Gly	Tyr	Cys	Tyr	Asn	Gly	Ile	Cys	Gln	Thr
				515					520					525
His	Glu	Gln	Gln	Cys	Val	Thr	Leu	Trp	Gly	Pro	Gly	Ala	Lys	Pro
				530					535					540
Ala	Pro	Gly	Ile	Cys	Phe	Glu	Arg	Val	Asn	Ser	Ala	Gly	Asp	Pro
				545					550					555
Tyr	Gly	Asn	Cys	Gly	Lys	Val	Ser	Lys	Ser	Ser	Phe	Ala	Lys	Cys
				560					565					570
Glu	Met	Arg	Asp	Ala	Lys	Cys	Gly	Lys	Ile	Gln	Cys	Gln	Gly	Gly
				575					580					585
Ala	Ser	Arg	Pro	Val	Ile	Gly	Thr	Asn	Ala	Val	Ser	Ile	Glu	Thr
				590					595					600
Asn	Ile	Pro	Leu	Gln	Gln	Gly	Gly	Arg	Ile	Leu	Cys	Arg	Gly	Thr
				605					610					615
His	Val	Tyr	Leu	Gly	Asp	Asp	Met	Pro	Asp	Pro	Gly	Leu	Val	Leu
				620					625					630
Ala	Gly	Thr	Lys	Cys	Ala	Asp	Gly	Lys	Ile	Cys	Leu	Asn	Arg	Gln
				635					640					645
Cys	Gln	Asn	Ile	Ser	Val	Phe	Gly	Val	His	Glu	Cys	Ala	Met	Gln
				650					655					660
Cys	His	Gly	Arg	Gly	Val	Cys	Asn	Asn	Arg	Lys	Asn	Cys	His	Cys
				665					670					675
Glu	Ala	His	Trp	Ala	Pro	Pro	Phe	Cys	Asp	Lys	Phe	Gly	Phe	Gly
				680					685					690
Gly	Ser	Thr	Asp	Ser	Gly	Pro	Ile	Arg	Gln	Ala	Glu	Ala	Arg	Gln
				695					700					705
Glu	Ala	Ala	Glu	Ser	Asn	Arg	Glu	Arg	Gly	Gln	Gly	Gln	Glu	Pro
				710					715					720
Val	Gly	Ser	Gln	Glu	His	Ala	Ser	Thr	Ala	Ser	Leu	Thr	Leu	Ile
				725					730					735

<210> 75

<211> 483

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 30, 94, 143, 156, 163, 179, 193, 369, 371, 381, 390, 473

<223> unknown base

<400> 75

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 ctgacaacga aaacaaaaca gttttggggg ttcaggaggg gaantccagc 100  
 ctaccagga agtttgcaga aacagtgcaa ggaagggcag ganttcctgg 150  
 ttgagntttt tgntaaaaca tggacatgnt tcagtgtgc tcntgagaga 200  
 gtagcagggtt accacttttg gcaggcccca gccctgcagc aaggaggaag 250  
 aggactcaaa agtttggcct ttcactgagc ctccacagca gtgggggaga 300  
 agcaagggtt gggcccagtg tcccccttcc ccagtgcac ctcagccttg 350  
 gcagccctga taactggtnt ntggctgcaa nttaatgctn tgatatggct 400  
 tttagcattt attatatgaa aatagcaggg ttttagtttt taatttatca 450  
 gagaccctgc caccattcc atntccatcc aag 483

<210> 76  
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<400> 76  
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<210> 77  
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 <223> Synthetic oligonucleotide probe

<400> 77  
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<210> 78  
 <211> 18  
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 <223> Synthetic oligonucleotide probe

<400> 78  
 taactgcacg atgggcac 18

<210> 79  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 79  
cactgggcac ctcccttc 18

<210> 80  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
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<400> 80  
ctccaggctg gtctccaagt ccttcc 26

<210> 81  
<211> 24  
<212> DNA  
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<220>  
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<400> 81  
tcctgttggt actctgcagc ttcc 24

<210> 82  
<211> 19  
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<400> 82  
cttcgctggg aagagtttg 19

<210> 83  
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<220>  
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<400> 83  
gtgcaaccaa cagatacaaa ctcttcccag cgaagaagct gaaaagcgtc 50

<210> 84  
<211> 1714  
<212> DNA  
<213> Homo sapiens

<400> 84  
catcctgcaa catggtgaaa ccacgcctgg ctaattttgt tgtatttttg 50





ctaatacagt gaaaccctgt ctctactaaa aatacaaaaa attagccggg 1550  
 gatggtggca ggcacctgga gtcccagcta ctcgaggaggc tgaggcagga 1600  
 gaatagcgtg aactcaggag gcggagcttg cagtgagccg agattgcgct 1650  
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 aaaaaaaaaa aaaa 1714

<210> 85  
 <211> 67  
 <212> PRT  
 <213> Homo sapiens

<400> 85  
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 Leu Ala Leu Leu Leu Pro Val Gln Val Ser Ser Phe Val Pro Leu  
 20 25 30  
 Thr Ser Met Pro Glu Ala Thr Ala Ala Glu Thr Thr Lys Pro Ser  
 35 40 45  
 Asn Ser Ala Leu Gln Pro Thr Ala Gly Leu Leu Val Val Leu Leu  
 50 55 60  
 Ala Leu Leu His Leu Tyr His  
 65

<210> 86  
 <211> 23  
 <212> DNA  
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<220>  
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<400> 86  
 acgggcacac tggatcccaa atg 23

<210> 87  
 <211> 29  
 <212> DNA  
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<220>  
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<400> 87  
 ggtagagatg tagaaggga agcaagacc 29

<210> 88  
 <211> 50  
 <212> DNA  
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<220>

<223> Synthetic oligonucleotide probe

<400> 88

gctccctacc cgtgcagggt tcttcatttg ttcctttaac cagtatgccg 50

<210> 89

<211> 2956

<212> DNA

<213> Homo sapiens

<400> 89

gccgcggcga gagcgcgccc agccccgccg cgatgcccgc gcgcccagga 50

cgctcctcc cgctgctggc ccggccggcg gccctgactg cgctgctgct 100

gctgctgctg ggccatggcg gcggcgggcg ctggggcgcc cgggcccagg 150

aggcggcgcg ggcgggcgcg gacggggccc ccgcggcaga cggcgaggac 200

ggacaggacc cgcacagcaa gcacctgtac acggccgaca tggtcacgca 250

cgggatccag agcgcgcgcg acttcgtcat gttcttcgcg ccctggtgtg 300

gacactgcca gcggctgcag ccgacttggg atgacctggg agacaaatac 350

aacagcatgg aagatgccaa agtctatgtg gctaaagtgg actgcacggc 400

ccactccgac gtgtgctccg cccagggggg gcgaggatac cccaccttaa 450

agcttttcaa gccaggccaa gaagctgtga agtaccaggg tctcgggac 500

ttccagacac tggaaaactg gatgctgcag aactgaacg aggagccagt 550

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ggctccaacc tgggagcagc tggctctggg ccttgaacat tccgaaactg 750

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aaccagggtc gtggctatcc cactcttctc tgggtccgag atgggaaaaa 850

ggtggatcag tacaaggga agcgggattt ggagtcactg agggagtacg 900

tggagtcgca gctgcagcgc acagagactg gagcgacgga gaccgtcacg 950

ccctcagagg ccccggtgct ggcagctgag cccgaggctg acaagggcac 1000

tgtgttgcca ctactgaaa ataacttcga tgacaccatt gcagaaggaa 1050

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 ttttaa 2956

<210> 90  
 <211> 432  
 <212> PRT  
 <213> Homo sapiens

<400> 90  
 Met Pro Ala Arg Pro Gly Arg Leu Leu Pro Leu Leu Ala Arg Pro  
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 Gly Gly Arg Trp Gly Ala Arg Ala Gln Glu Ala Ala Ala Ala Ala  
 35 40 45  
 Ala Asp Gly Pro Pro Ala Ala Asp Gly Glu Asp Gly Gln Asp Pro  
 50 55 60  
 His Ser Lys His Leu Tyr Thr Ala Asp Met Phe Thr His Gly Ile  
 65 70 75  
 Gln Ser Ala Ala His Phe Val Met Phe Phe Ala Pro Trp Cys Gly  
 80 85 90  
 His Cys Gln Arg Leu Gln Pro Thr Trp Asn Asp Leu Gly Asp Lys  
 95 100 105  
 Tyr Asn Ser Met Glu Asp Ala Lys Val Tyr Val Ala Lys Val Asp  
 110 115 120  
 Cys Thr Ala His Ser Asp Val Cys Ser Ala Gln Gly Val Arg Gly  
 125 130 135  
 Tyr Pro Thr Leu Lys Leu Phe Lys Pro Gly Gln Glu Ala Val Lys  
 140 145 150  
 Tyr Gln Gly Pro Arg Asp Phe Gln Thr Leu Glu Asn Trp Met Leu  
 155 160 165  
 Gln Thr Leu Asn Glu Glu Pro Val Thr Pro Glu Pro Glu Val Glu  
 170 175 180

Pro	Pro	Ser	Ala	Pro	Glu	Leu	Lys	Gln	Gly	Leu	Tyr	Glu	Leu	Ser	
				185					190					195	
Ala	Ser	Asn	Phe	Glu	Leu	His	Val	Ala	Gln	Gly	Asp	His	Phe	Ile	
				200					205					210	
Lys	Phe	Phe	Ala	Pro	Trp	Cys	Gly	His	Cys	Lys	Ala	Leu	Ala	Pro	
				215					220					225	
Thr	Trp	Glu	Gln	Leu	Ala	Leu	Gly	Leu	Glu	His	Ser	Glu	Thr	Val	
				230					235					240	
Lys	Ile	Gly	Lys	Val	Asp	Cys	Thr	Gln	His	Tyr	Glu	Leu	Cys	Ser	
				245					250					255	
Gly	Asn	Gln	Val	Arg	Gly	Tyr	Pro	Thr	Leu	Leu	Trp	Phe	Arg	Asp	
				260					265					270	
Gly	Lys	Lys	Val	Asp	Gln	Tyr	Lys	Gly	Lys	Arg	Asp	Leu	Glu	Ser	
				275					280					285	
Leu	Arg	Glu	Tyr	Val	Glu	Ser	Gln	Leu	Gln	Arg	Thr	Glu	Thr	Gly	
				290					295					300	
Ala	Thr	Glu	Thr	Val	Thr	Pro	Ser	Glu	Ala	Pro	Val	Leu	Ala	Ala	
				305					310					315	
Glu	Pro	Glu	Ala	Asp	Lys	Gly	Thr	Val	Leu	Ala	Leu	Thr	Glu	Asn	
				320					325					330	
Asn	Phe	Asp	Asp	Thr	Ile	Ala	Glu	Gly	Ile	Thr	Phe	Ile	Lys	Phe	
				335					340					345	
Tyr	Ala	Pro	Trp	Cys	Gly	His	Cys	Lys	Thr	Leu	Ala	Pro	Thr	Trp	
				350					355					360	
Glu	Glu	Leu	Ser	Lys	Lys	Glu	Phe	Pro	Gly	Leu	Ala	Gly	Val	Lys	
				365					370					375	
Ile	Ala	Glu	Val	Asp	Cys	Thr	Ala	Glu	Arg	Asn	Ile	Cys	Ser	Lys	
				380					385					390	
Tyr	Ser	Val	Arg	Gly	Tyr	Pro	Thr	Leu	Leu	Leu	Phe	Arg	Gly	Gly	
				395					400					405	
Lys	Lys	Val	Ser	Glu	His	Ser	Gly	Gly	Arg	Asp	Leu	Asp	Ser	Leu	
				410					415					420	
His	Arg	Phe	Val	Leu	Ser	Gln	Ala	Lys	Asp	Glu	Leu				
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<210> 91

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 91  
atgttcttcg cgccctggtg 20

<210> 92  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 92  
ccaagccaac acactctaca g 21

<210> 93  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 93  
aagtggtcgc cttgtgcaac gtgc 24

<210> 94  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 94  
ggtcaaaggg gatatatcgc cac 23

<210> 95  
<211> 49  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 95  
gcatggaaga tgccaaagtc tatgtggcta aagtggactg cacggcca 49

<210> 96  
<211> 1016  
<212> DNA  
<213> Homo sapiens

<400> 96  
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gtctggatat tgatagccgt cctaccgctg aagtctgtgc cacacacaca 150

atttcaccag gacccaaagg agatgatggt gaaaaaggag atccaggaga 200  
 agaggggaaag catggcaaag tgggacgcat ggggccgaaa ggaattaaag 250  
 gagaactggg tgatatggga gatcagggca atattggcaa gactggggccc 300  
 attgggaaga agggtgacaa aggggaaaaa ggtttgcttg gaatacctgg 350  
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 ttgttggaaca actggatatt agtattgctc ggctcaagac atctatgaag 450  
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 cgtgaatgac cttgaaaggg agggacagta catgtccaca gacaacactc 700  
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 cagttattgt tatccatcct ttttttcctg attgtactac atttgatctg 950  
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 aaaaaaaaaa aaaaaa 1016

<210> 97  
 <211> 277  
 <212> PRT  
 <213> Homo sapiens

<400> 97  
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 20 25 30  
 Asp Ser Arg Pro Thr Ala Glu Val Cys Ala Thr His Thr Ile Ser  
 35 40 45  
 Pro Gly Pro Lys Gly Asp Asp Gly Glu Lys Gly Asp Pro Gly Glu  
 50 55 60  
 Glu Gly Lys His Gly Lys Val Gly Arg Met Gly Pro Lys Gly Ile  
 65 70 75  
 Lys Gly Glu Leu Gly Asp Met Gly Asp Gln Gly Asn Ile Gly Lys



	80	85	90
Thr Gly Pro Ile	Gly Lys Lys Gly Asp	Lys Gly Glu Lys Gly	Leu
	95	100	105
Leu Gly Ile Pro	Gly Glu Lys Gly Lys	Ala Gly Thr Val Cys	Asp
	110	115	120
Cys Gly Arg Tyr	Arg Lys Phe Val Gly	Gln Leu Asp Ile Ser	Ile
	125	130	135
Ala Arg Leu Lys	Thr Ser Met Lys Phe	Val Lys Asn Val Ile	Ala
	140	145	150
Gly Ile Arg Glu	Thr Glu Glu Lys Phe	Tyr Tyr Ile Val Gln	Glu
	155	160	165
Glu Lys Asn Tyr	Arg Glu Ser Leu Thr	His Cys Arg Ile Arg	Gly
	170	175	180
Gly Met Leu Ala	Met Pro Lys Asp Glu	Ala Ala Asn Thr Leu	Ile
	185	190	195
Ala Asp Tyr Val	Ala Lys Ser Gly Phe	Phe Arg Val Phe Ile	Gly
	200	205	210
Val Asn Asp Leu	Glu Arg Glu Gly Gln	Tyr Met Ser Thr Asp	Asn
	215	220	225
Thr Pro Leu Gln	Asn Tyr Ser Asn Trp	Asn Glu Gly Glu Pro	Ser
	230	235	240
Asp Pro Tyr Gly	His Glu Asp Cys Val	Glu Met Leu Ser Ser	Gly
	245	250	255
Arg Trp Asn Asp	Thr Glu Cys His Leu	Thr Met Tyr Phe Val	Cys
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Glu Phe Ile Lys	Lys Lys Lys		
	275		

<210> 98  
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 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 98  
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 <210> 99  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>

<223> Synthetic oligonucleotide probe

<400> 99

gatgatggag gctccataacc tcag 24

<210> 100

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 100

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<210> 101

<211> 2574

<212> DNA

<213> Homo sapiens

<400> 101

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gggcctgggt gggaatgggc gtgtgccagc gcacgcgcgc tccctggaag 150

gagaagtctc agctagaacg agcggcccta ggttttcgga agggaggatc 200

agggatgttt gcgagcggct ggaaccagac ggtgccgata gaggaagcgg 250

gctccatggc tgccctcctg ctgctgcccc tgctgctgtt gctaccgctg 300

ctgctgctga agctacacct ctggccgcag ttgcgctggc ttccggcgga 350

cttggccttt gcggtgcgag ctctgtgctg caaaagggct cttcgagctc 400

gcgccctggc cgcggctgcc gccgaccggg aaggtcccga ggggggctgc 450

agcctggcct ggcgcctcgc ggaactggcc cagcagcgcg ccgcgcacac 500

ctttctcatt cacggctcgc ggcgcttttag ctactcagag gcggagcgcg 550

agagtaacag ggctgcacgc gccttcctac gtgcgctagg ctgggactgg 600

ggacccgacg gcggcgacag cggcgagggg agcgctggag aaggcgagcg 650

ggcagcgccg ggagccggag atgcagcggc cggaagcggc gcggagttag 700

ccggagggga cggtgccgcc agaggtggag gagccgccgc ccctctgtca 750

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 tatgcccggc cccgattcct caggctccag gagtctttgg ccaccacaga 2150  
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 gcacctgtc tgacctactg tacgttctgg accaggctgt aggtgcctac 2250  
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 aatctgagaa cttccacacc tgaggcacct gagagaggaa ctctgtgggg 2350

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<210> 102  
 <211> 730  
 <212> PRT  
 <213> Homo sapiens

<400> 102  
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 Met Phe Ala Ser Gly Trp Asn Gln Thr Val Pro Ile Glu Glu Ala  
 35 40 45  
 Gly Ser Met Ala Ala Leu Leu Leu Leu Pro Leu Leu Leu Leu Leu  
 50 55 60  
 Pro Leu Leu Leu Leu Lys Leu His Leu Trp Pro Gln Leu Arg Trp  
 65 70 75  
 Leu Pro Ala Asp Leu Ala Phe Ala Val Arg Ala Leu Cys Cys Lys  
 80 85 90  
 Arg Ala Leu Arg Ala Arg Ala Leu Ala Ala Ala Ala Asp Pro  
 95 100 105  
 Glu Gly Pro Glu Gly Gly Cys Ser Leu Ala Trp Arg Leu Ala Glu  
 110 115 120  
 Leu Ala Gln Gln Arg Ala Ala His Thr Phe Leu Ile His Gly Ser  
 125 130 135  
 Arg Arg Phe Ser Tyr Ser Glu Ala Glu Arg Glu Ser Asn Arg Ala  
 140 145 150  
 Ala Arg Ala Phe Leu Arg Ala Leu Gly Trp Asp Trp Gly Pro Asp  
 155 160 165  
 Gly Gly Asp Ser Gly Glu Gly Ser Ala Gly Glu Gly Glu Arg Ala  
 170 175 180  
 Ala Pro Gly Ala Gly Asp Ala Ala Ala Gly Ser Gly Ala Glu Phe  
 185 190 195  
 Ala Gly Gly Asp Gly Ala Ala Arg Gly Gly Gly Ala Ala Ala Pro  
 200 205 210

Leu	Ser	Pro	Gly	Ala	Thr	Val	Ala	Leu	Leu	Leu	Pro	Ala	Gly	Pro	215	220	225
Glu	Phe	Leu	Trp	Leu	Trp	Phe	Gly	Leu	Ala	Lys	Ala	Gly	Leu	Arg	230	235	240
Thr	Ala	Phe	Val	Pro	Thr	Ala	Leu	Arg	Arg	Gly	Pro	Leu	Leu	His	245	250	255
Cys	Leu	Arg	Ser	Cys	Gly	Ala	Arg	Ala	Leu	Val	Leu	Ala	Pro	Glu	260	265	270
Phe	Leu	Glu	Ser	Leu	Glu	Pro	Asp	Leu	Pro	Ala	Leu	Arg	Ala	Met	275	280	285
Gly	Leu	His	Leu	Trp	Ala	Ala	Gly	Pro	Gly	Thr	His	Pro	Ala	Gly	290	295	300
Ile	Ser	Asp	Leu	Leu	Ala	Glu	Val	Ser	Ala	Glu	Val	Asp	Gly	Pro	305	310	315
Val	Pro	Gly	Tyr	Leu	Ser	Ser	Pro	Gln	Ser	Ile	Thr	Asp	Thr	Cys	320	325	330
Leu	Tyr	Ile	Phe	Thr	Ser	Gly	Thr	Thr	Gly	Leu	Pro	Lys	Ala	Ala	335	340	345
Arg	Ile	Ser	His	Leu	Lys	Ile	Leu	Gln	Cys	Gln	Gly	Phe	Tyr	Gln	350	355	360
Leu	Cys	Gly	Val	His	Gln	Glu	Asp	Val	Ile	Tyr	Leu	Ala	Leu	Pro	365	370	375
Leu	Tyr	His	Met	Ser	Gly	Ser	Leu	Leu	Gly	Ile	Val	Gly	Cys	Met	380	385	390
Gly	Ile	Gly	Ala	Thr	Val	Val	Leu	Lys	Ser	Lys	Phe	Ser	Ala	Gly	395	400	405
Gln	Phe	Trp	Glu	Asp	Cys	Gln	Gln	His	Arg	Val	Thr	Val	Phe	Gln	410	415	420
Tyr	Ile	Gly	Glu	Leu	Cys	Arg	Tyr	Leu	Val	Asn	Gln	Pro	Pro	Ser	425	430	435
Lys	Ala	Glu	Arg	Gly	His	Lys	Val	Arg	Leu	Ala	Val	Gly	Ser	Gly	440	445	450
Leu	Arg	Pro	Asp	Thr	Trp	Glu	Arg	Phe	Val	Arg	Arg	Phe	Gly	Pro	455	460	465
Leu	Gln	Val	Leu	Glu	Thr	Tyr	Gly	Leu	Thr	Glu	Gly	Asn	Val	Ala	470	475	480
Thr	Ile	Asn	Tyr	Thr	Gly	Gln	Arg	Gly	Ala	Val	Gly	Arg	Ala	Ser	485	490	495
Trp	Leu	Tyr	Lys	His	Ile	Phe	Pro	Phe	Ser	Leu	Ile	Arg	Tyr	Asp			

	500		505		510
Val Thr Thr Gly	Glu Pro Ile Arg Asp	Pro Gln Gly His Cys	Met		
	515	520	525		
Ala Thr Ser Pro	Gly Glu Pro Gly Leu	Leu Val Ala Pro Val	Ser		
	530	535	540		
Gln Gln Ser Pro	Phe Leu Gly Tyr Ala	Gly Gly Pro Glu Leu	Ala		
	545	550	555		
Gln Gly Lys Leu	Leu Lys Asp Val Phe	Arg Pro Gly Asp Val	Phe		
	560	565	570		
Phe Asn Thr Gly	Asp Leu Leu Val Cys	Asp Asp Gln Gly Phe	Leu		
	575	580	585		
Arg Phe His Asp	Arg Thr Gly Asp Thr	Phe Arg Trp Lys Gly	Glu		
	590	595	600		
Asn Val Ala Thr	Thr Glu Val Ala Glu	Val Phe Glu Ala Leu	Asp		
	605	610	615		
Phe Leu Gln Glu	Val Asn Val Tyr Gly	Val Thr Val Pro Gly	His		
	620	625	630		
Glu Gly Arg Ala	Gly Met Ala Ala Leu	Val Leu Arg Pro Pro	His		
	635	640	645		
Ala Leu Asp Leu	Met Gln Leu Tyr Thr	His Val Ser Glu Asn	Leu		
	650	655	660		
Pro Pro Tyr Ala	Arg Pro Arg Phe Leu	Arg Leu Gln Glu Ser	Leu		
	665	670	675		
Ala Thr Thr Glu	Thr Phe Lys Gln Gln	Lys Val Arg Met Ala	Asn		
	680	685	690		
Glu Gly Phe Asp	Pro Ser Thr Leu Ser	Asp Pro Leu Tyr Val	Leu		
	695	700	705		
Asp Gln Ala Val	Gly Ala Tyr Leu Pro	Leu Thr Thr Ala Arg	Tyr		
	710	715	720		
Ser Ala Leu Leu	Ala Gly Asn Leu Arg	Ile			
	725	730			

<210> 103

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 103

gagagccatg gggctccacc tg 22

<210> 104  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 104  
ggagaatgtg gccacaac 18

<210> 105  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 105  
gccctggcac agtgactcca tagacg 26

<210> 106  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 106  
atccacttca gcggacac 18

<210> 107  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 107  
ccagtgccag gatacctctc ttccccccag agcataacag acacg 45

<210> 108  
<211> 2579  
<212> DNA  
<213> Homo sapiens

<400> 108  
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acgcgcgcac acacactcgc tctcgtttgt ccatctccct cccgggggag 150  
ccggcgcgcg ctcccacctt tgccgcacac tccggcgagc cgagcccgcgca 200

gcgctccagg attctgcggc tcggaactcg gattgcagct ctgaaccccc 250  
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 accgtttcca tctgggggct agaggagcaa ggcagcagcc ttcccagcca 350  
 gcccttggtg gcttgccatc gtccatctgg cttataaaaag tttgctgagc 400  
 gcagtccaga gggctgcgct gctcgtcccc tcggctggca gaaggggggtg 450  
 acgtgggca gcggcgagga gcgcgccgct gcctctggcg ggctttcggc 500  
 ttgaggggca aggtgaagag cgcaccggcc gtgggggttta ccgagctgga 550  
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 ggaatataca tgctgcacca cagaaatgga agacaagtta agccaacaaa 800  
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 cctgctccag ccctcagatc tgcccgtca gctcctgaaa attttaatac 1650



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 ttcttacctt catttgcttt tatgctgcag aagtaaagga atctcacgtt 2550  
 gtgagggttt tttttttctc atttaaaat 2579

<210> 109  
 <211> 555  
 <212> PRT  
 <213> Homo sapiens

<400> 109  
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 20 25 30  
 Gly Glu Val Arg Gln Ala Tyr Gly Ala Lys Gly Phe Ser Leu Ala  
 35 40 45  
 Asp Ile Pro Tyr Gln Glu Ile Ala Gly Glu His Leu Arg Ile Cys  
 50 55 60  
 Pro Gln Glu Tyr Thr Cys Cys Thr Thr Glu Met Glu Asp Lys Leu  
 65 70 75

Ser	Gln	Gln	Ser	Lys	Leu	Glu	Phe	Glu	Asn	Leu	Val	Glu	Glu	Thr	80	85	90
Ser	His	Phe	Val	Arg	Thr	Thr	Phe	Val	Ser	Arg	His	Lys	Lys	Phe	95	100	105
Asp	Glu	Phe	Phe	Arg	Glu	Leu	Leu	Glu	Asn	Ala	Glu	Lys	Ser	Leu	110	115	120
Asn	Asp	Met	Phe	Val	Arg	Thr	Tyr	Gly	Met	Leu	Tyr	Met	Gln	Asn	125	130	135
Ser	Glu	Val	Phe	Gln	Asp	Leu	Phe	Thr	Glu	Leu	Lys	Arg	Tyr	Tyr	140	145	150
Thr	Gly	Gly	Asn	Val	Asn	Leu	Glu	Glu	Met	Leu	Asn	Asp	Phe	Trp	155	160	165
Ala	Arg	Leu	Leu	Glu	Arg	Met	Phe	Gln	Leu	Ile	Asn	Pro	Gln	Tyr	170	175	180
His	Phe	Ser	Glu	Asp	Tyr	Leu	Glu	Cys	Val	Ser	Lys	Tyr	Thr	Asp	185	190	195
Gln	Leu	Lys	Pro	Phe	Gly	Asp	Val	Pro	Arg	Lys	Leu	Lys	Ile	Gln	200	205	210
Val	Thr	Arg	Ala	Phe	Ile	Ala	Ala	Arg	Thr	Phe	Val	Gln	Gly	Leu	215	220	225
Thr	Val	Gly	Arg	Glu	Val	Ala	Asn	Arg	Val	Ser	Lys	Val	Ser	Pro	230	235	240
Thr	Pro	Gly	Cys	Ile	Arg	Ala	Leu	Met	Lys	Met	Leu	Tyr	Cys	Pro	245	250	255
Tyr	Cys	Arg	Gly	Leu	Pro	Thr	Val	Arg	Pro	Cys	Asn	Asn	Tyr	Cys	260	265	270
Leu	Asn	Val	Met	Lys	Gly	Cys	Leu	Ala	Asn	Gln	Ala	Asp	Leu	Asp	275	280	285
Thr	Glu	Trp	Asn	Leu	Phe	Ile	Asp	Ala	Met	Leu	Leu	Val	Ala	Glu	290	295	300
Arg	Leu	Glu	Gly	Pro	Phe	Asn	Ile	Glu	Ser	Val	Met	Asp	Pro	Ile	305	310	315
Asp	Val	Lys	Ile	Ser	Glu	Ala	Ile	Met	Asn	Met	Gln	Glu	Asn	Ser	320	325	330
Met	Gln	Val	Ser	Ala	Lys	Val	Phe	Gln	Gly	Cys	Gly	Gln	Pro	Lys	335	340	345
Pro	Ala	Pro	Ala	Leu	Arg	Ser	Ala	Arg	Ser	Ala	Pro	Glu	Asn	Phe	350	355	360
Asn	Thr	Arg	Phe	Arg	Pro	Tyr	Asn	Pro	Glu	Glu	Arg	Pro	Thr	Thr			

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 tcagtaagtt gaggtcaaaa ataaaggaat catacatctc 3240

<210> 183  
 <211> 713  
 <212> PRT  
 <213> Homo sapiens

<400> 183  
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 20 25 30  
 Pro Pro Ala Val Leu Leu Glu Val Gln Gly Thr Leu Gln Arg Pro  
 35 40 45  
 Leu Val Arg Asp Ser Arg Thr Ser Pro Ala Asn Cys Thr Trp Leu  
 50 55 60  
 Ile Leu Gly Ser Lys Glu Gln Thr Val Thr Ile Arg Phe Gln Lys  
 65 70 75  
 Leu His Leu Ala Cys Gly Ser Glu Arg Leu Thr Leu Arg Ser Pro  
 80 85 90  
 Leu Gln Pro Leu Ile Ser Leu Cys Glu Ala Pro Pro Ser Pro Leu  
 95 100 105  
 Gln Leu Pro Gly Gly Asn Val Thr Ile Thr Tyr Ser Tyr Ala Gly  
 110 115 120  
 Ala Arg Ala Pro Met Gly Gln Gly Phe Leu Leu Ser Tyr Ser Gln  
 125 130 135  
 Asp Trp Leu Met Cys Leu Gln Glu Glu Phe Gln Cys Leu Asn His  
 140 145 150  
 Arg Cys Val Ser Ala Val Gln Arg Cys Asp Gly Val Asp Ala Cys  
 155 160 165  
 Gly Asp Gly Ser Asp Glu Ala Gly Cys Ser Ser Asp Pro Phe Pro

	170		175		180
Gly Leu Thr Pro	Arg 185	Pro Val Pro Ser	Leu 190	Pro Cys Asn Val	Thr 195
Leu Glu Asp Phe	Tyr 200	Gly Val Phe Ser	Ser 205	Pro Gly Tyr Thr	His 210
Leu Ala Ser Val	Ser 215	His Pro Gln Ser	Cys 220	His Trp Leu Leu	Asp 225
Pro His Asp Gly	Arg 230	Arg Leu Ala Val	Arg 235	Phe Thr Ala Leu	Asp 240
Leu Gly Phe Gly	Asp 245	Ala Val His Val	Tyr 250	Asp Gly Pro Gly	Pro 255
Pro Glu Ser Ser	Arg 260	Leu Leu Arg Ser	Leu 265	Thr His Phe Ser	Asn 270
Gly Lys Ala Val	Thr 275	Val Glu Thr Leu	Ser 280	Gly Gln Ala Val	Val 285
Ser Tyr His Thr	Val 290	Ala Trp Ser Asn	Gly 295	Arg Gly Phe Asn	Ala 300
Thr Tyr His Val	Arg 305	Gly Tyr Cys Leu	Pro 310	Trp Asp Arg Pro	Cys 315
Gly Leu Gly Ser	Gly 320	Leu Gly Ala Gly	Glu 325	Gly Leu Gly Glu	Arg 330
Cys Tyr Ser Glu	Ala 335	Gln Arg Cys Asp	Gly 340	Ser Trp Asp Cys	Ala 345
Asp Gly Thr Asp	Glu 350	Glu Asp Cys Pro	Gly 355	Cys Pro Pro Gly	His 360
Phe Pro Cys Gly	Ala 365	Ala Gly Thr Ser	Gly 370	Ala Thr Ala Cys	Tyr 375
Leu Pro Ala Asp	Arg 380	Cys Asn Tyr Gln	Thr 385	Phe Cys Ala Asp	Gly 390
Ala Asp Glu Arg	Arg 395	Cys Arg His Cys	Gln 400	Pro Gly Asn Phe	Arg 405
Cys Arg Asp Glu	Lys 410	Cys Val Tyr Glu	Thr 415	Trp Val Cys Asp	Gly 420
Gln Pro Asp Cys	Ala 425	Asp Gly Ser Asp	Glu 430	Trp Asp Cys Ser	Tyr 435
Val Leu Pro Arg	Lys 440	Val Ile Thr Ala	Ala 445	Val Ile Gly Ser	Leu 450
Val Cys Gly Leu	Leu 455	Leu Val Ile Ala	Leu 460	Gly Cys Thr Cys	Lys 465

Leu Tyr Ala Ile	Arg Thr Gln Glu Tyr	Ser Ile Phe Ala Pro	Leu
470		475	480
Ser Arg Met Glu	Ala Glu Ile Val Gln	Gln Gln Ala Pro Pro	Ser
485		490	495
Tyr Gly Gln Leu	Ile Ala Gln Gly Ala	Ile Pro Pro Val Glu	Asp
500		505	510
Phe Pro Thr Glu	Asn Pro Asn Asp Asn	Ser Val Leu Gly Asn	Leu
515		520	525
Arg Ser Leu Leu	Gln Ile Leu Arg Gln	Asp Met Thr Pro Gly	Gly
530		535	540
Gly Pro Gly Ala	Arg Arg Arg Gln Arg	Gly Arg Leu Met Arg	Arg
545		550	555
Leu Val Arg Arg	Leu Arg Arg Trp Gly	Leu Leu Pro Arg Thr	Asn
560		565	570
Thr Pro Ala Arg	Ala Ser Glu Ala Arg	Ser Gln Val Thr Pro	Ser
575		580	585
Ala Ala Pro Leu	Glu Ala Leu Asp Gly	Gly Thr Gly Pro Ala	Arg
590		595	600
Glu Gly Gly Ala	Val Gly Gly Gln Asp	Gly Glu Gln Ala Pro	Pro
605		610	615
Leu Pro Ile Lys	Ala Pro Leu Pro Ser	Ala Ser Thr Ser Pro	Ala
620		625	630
Pro Thr Thr Val	Pro Glu Ala Pro Gly	Pro Leu Pro Ser Leu	Pro
635		640	645
Leu Glu Pro Ser	Leu Leu Ser Gly Val	Val Gln Ala Leu Arg	Gly
650		655	660
Arg Leu Leu Pro	Ser Leu Gly Pro Pro	Gly Pro Thr Arg Ser	Pro
665		670	675
Pro Gly Pro His	Thr Ala Val Leu Ala	Leu Glu Asp Glu Asp	Asp
680		685	690
Val Leu Leu Val	Pro Leu Ala Glu Pro	Gly Val Trp Val Ala	Glu
695		700	705
Ala Glu Asp Glu	Pro Leu Leu Thr		
710			

<210> 184

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 184  
ggctgtcact gtggagacac 20

<210> 185  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 185  
gcaaggtcac tacagctg 18

<210> 186  
<211> 23  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 186  
agaacatagg agcagtcacca ctc 23

<210> 187  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 187  
tgcttgctgc tgcacaatct cag 23

<210> 188  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 188  
ggctattgct tgccttgga cagaccctgt ggcttaggct ctggc 45

<210> 189  
<211> 663  
<212> DNA  
<213> Homo sapiens

<400> 189  
cgagctgggc gagaagtagg ggagggcggt gctccgccgc ggtggcggtt 50  
gctatcgctt cgcagaacct actcaggcag ccagctgaga agagttgagg 100  
gaaagtgctg ctgctgggtc tgcagacgcg atggataacg tgcagccgaa 150

aataaaacat cgcccttct gcttcagtgt gaaaggccac gtgaagatgc 200  
tgcggtggc actaactgtg acatctatga ccttttttat catcgacaa 250  
gcccctgaac catatattgt tatcactgga tttgaagtca ccgttatctt 300  
atttttcata ctttttatatg tactcagact tgatcgatta atgaagtgg 350  
tattttggcc tttgcttgat attatcaact cactggtaac aacagtattc 400  
atgctcatcg tatctgtgtt ggactgata ccagaaacca caacattgac 450  
agttgggtgga ggggtgtttg cacttgtagc agcagtatgc tgtcttgccg 500  
acggggccct tatttaccgg aagcttctgt tcaatcccag cggtccttac 550  
cagaaaaagc ctgtgcatga aaaaaaagaa gttttgtaat tttatattac 600  
tttttagttt gatactaagt attaaacata tttctgtatt cttccaaaaa 650  
aaaaaaaaa aaa 663

<210> 190  
<211> 152  
<212> PRT  
<213> Homo sapiens

<400> 190  
Met Asp Asn Val Gln Pro Lys Ile Lys His Arg Pro Phe Cys Phe  
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Ser Val Lys Gly His Val Lys Met Leu Arg Leu Ala Leu Thr Val  
20 25 30  
Thr Ser Met Thr Phe Phe Ile Ile Ala Gln Ala Pro Glu Pro Tyr  
35 40 45  
Ile Val Ile Thr Gly Phe Glu Val Thr Val Ile Leu Phe Phe Ile  
50 55 60  
Leu Leu Tyr Val Leu Arg Leu Asp Arg Leu Met Lys Trp Leu Phe  
65 70 75  
Trp Pro Leu Leu Asp Ile Ile Asn Ser Leu Val Thr Thr Val Phe  
80 85 90  
Met Leu Ile Val Ser Val Leu Ala Leu Ile Pro Glu Thr Thr Thr  
95 100 105  
Leu Thr Val Gly Gly Gly Val Phe Ala Leu Val Thr Ala Val Cys  
110 115 120  
Cys Leu Ala Asp Gly Ala Leu Ile Tyr Arg Lys Leu Leu Phe Asn  
125 130 135  
Pro Ser Gly Pro Tyr Gln Lys Lys Pro Val His Glu Lys Lys Glu  
140 145 150

Val Leu

<210> 191  
<211> 495  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 78, 212, 234, 487  
<223> unknown base

<400> 191  
gggcgagaag taggggaggg cgtgttccgc cgcggtggcg gttgctatcg 50  
ttttgcagaa cctactcagg cagccagntg agaagagttg agggaaagtg 100  
ctgtgctggt gtctgcagac gcgatggata acgtgcagcc gaaaataaaa 150  
catcgcccct tctgcttcag tgtgaaaggc cacgtgaaga tgctgcggct 200  
ggcactaact gngacatcta tgaccttttt tatnatcgca caagcccctg 250  
aaccatatat tggtatcact ggatttgaag tcaccgttat cttatttttc 300  
atacttttat atgtactcag acttgatcga ttaatgaagt ggttattttg 350  
gcctttgctt gatattatca actcactggg aacaacagta ttcattgctca 400  
tcgtatctgt gttggcactg ataccagaaa ccacaacatt gacagttggg 450  
ggaggggtgt ttgcacttgt gacagcagta tgctgtnttg ccgac 495

<210> 192  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 192  
cgttttgcag aacctactca ggcag 25

<210> 193  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 193  
cctccaccaa ctgtcaatgt tgtgg 25

<210> 194  
<211> 40



<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 194  
aaagtgctgc tgctgggtct gcagacgcga tggataacgt 40

<210> 195  
<211> 1879  
<212> DNA  
<213> Homo sapien

<400> 195  
cagccccgcg cgccggccga gtcgctgagc cgcggtgcc ggacgggacg 50  
ggaccggcta ggctggggcg gcccccgagg ccccgccgtg ggcatggggc 100  
cactggcccc ggcgctgctg ctgcctctgc tggcccagtg gtcctgcgc 150  
gccgcccccg agctggcccc cgcgcccttc acgctgcccc tccgggtggc 200  
cgcggccacg aaccgcgtag ttgcgccac cccgggaccc gggaccctg 250  
ccgagcgcca cgccgacggc ttggcgctcg ccctggagcc tgccctggcg 300  
tcccccgagg gcgcccga cttcttgagg atggtagaca acctgcaggg 350  
ggactctggc cgcggtact acctggagat gctgatcggg accccccgc 400  
agaagctaca gattctcggt gacactggaa gcagtaactt tgccgtggca 450  
ggaacccccg actcctacat agacacgtac ttgacacag agaggtctag 500  
cacataccgc tccaagggtt ttgacgtcac agtgaagtac acacaaggaa 550  
gctggacggg ctctggtggg gaagacctcg tcaccatccc caaaggcttc 600  
aatacttctt ttcttgtaaa cattgccact atttttgaat cagagaattt 650  
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aagccttaat ctggactgca gagagtataa gcgagacaag gccatcgtgg 1000  
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ctggactggg tcccagctgg cgtgctggac gaattcggaa acaccttggg 1150  
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 tcattccgta tcacaatcct gcctcagctt tacattcagc ccatgatggg 1250  
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 atgcgctggg gatcggtgcc acggtgatgg agggcttcta cgtcatcttc 1350  
 gagagagccc agaagagggt gggcttcgca gcgagcccct gtgcagaaat 1400  
 tgcaggtgct gcagtgtctg aaatttccgg gcctttctca acagaggatg 1450  
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 attgtgtcct atgcgctcat gagcgtctgt ggagccatcc tccttgtctt 1550  
 aatcgtcctg ctgctgctgc cgttccgggt tcagcgtcgc ccccgtagcc 1600  
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 caccgctctt caatctctgt tctgctccca gatgccttct agattcactg 1800  
 tcttttgatt cttgattttc aagctttcaa atcctcccta cttccaagaa 1850  
 aaataattaa aaaaaaaaact tcattctaa 1879

<210> 196  
 <211> 518  
 <212> PRT  
 <213> Homo sapien

<400> 196  
 Met Gly Ala Leu Ala Arg Ala Leu Leu Leu Pro Leu Leu Ala Gln  
 1 5 10 15  
 Trp Leu Leu Arg Ala Ala Pro Glu Leu Ala Pro Ala Pro Phe Thr  
 20 25 30  
 Leu Pro Leu Arg Val Ala Ala Ala Thr Asn Arg Val Val Ala Pro  
 35 40 45  
 Thr Pro Gly Pro Gly Thr Pro Ala Glu Arg His Ala Asp Gly Leu  
 50 55 60  
 Ala Leu Ala Leu Glu Pro Ala Leu Ala Ser Pro Ala Gly Ala Ala  
 65 70 75  
 Asn Phe Leu Ala Met Val Asp Asn Leu Gln Gly Asp Ser Gly Arg  
 80 85 90  
 Gly Tyr Tyr Leu Glu Met Leu Ile Gly Thr Pro Pro Gln Lys Leu  
 95 100 105

Gln	Ile	Leu	Val	Asp	Thr	Gly	Ser	Ser	Asn	Phe	Ala	Val	Ala	Gly	110	115	120
Thr	Pro	His	Ser	Tyr	Ile	Asp	Thr	Tyr	Phe	Asp	Thr	Glu	Arg	Ser	125	130	135
Ser	Thr	Tyr	Arg	Ser	Lys	Gly	Phe	Asp	Val	Thr	Val	Lys	Tyr	Thr	140	145	150
Gln	Gly	Ser	Trp	Thr	Gly	Phe	Val	Gly	Glu	Asp	Leu	Val	Thr	Ile	155	160	165
Pro	Lys	Gly	Phe	Asn	Thr	Ser	Phe	Leu	Val	Asn	Ile	Ala	Thr	Ile	170	175	180
Phe	Glu	Ser	Glu	Asn	Phe	Phe	Leu	Pro	Gly	Ile	Lys	Trp	Asn	Gly	185	190	195
Ile	Leu	Gly	Leu	Ala	Tyr	Ala	Thr	Leu	Ala	Lys	Pro	Ser	Ser	Ser	200	205	210
Leu	Glu	Thr	Phe	Phe	Asp	Ser	Leu	Val	Thr	Gln	Ala	Asn	Ile	Pro	215	220	225
Asn	Val	Phe	Ser	Met	Gln	Met	Cys	Gly	Ala	Gly	Leu	Pro	Val	Ala	230	235	240
Gly	Ser	Gly	Thr	Asn	Gly	Gly	Ser	Leu	Val	Leu	Gly	Gly	Ile	Glu	245	250	255
Pro	Ser	Leu	Tyr	Lys	Gly	Asp	Ile	Trp	Tyr	Thr	Pro	Ile	Lys	Glu	260	265	270
Glu	Trp	Tyr	Tyr	Gln	Ile	Glu	Ile	Leu	Lys	Leu	Glu	Ile	Gly	Gly	275	280	285
Gln	Ser	Leu	Asn	Leu	Asp	Cys	Arg	Glu	Tyr	Asn	Ala	Asp	Lys	Ala	290	295	300
Ile	Val	Asp	Ser	Gly	Thr	Thr	Leu	Leu	Arg	Leu	Pro	Gln	Lys	Val	305	310	315
Phe	Asp	Ala	Val	Val	Glu	Ala	Val	Ala	Arg	Ala	Ser	Leu	Ile	Pro	320	325	330
Glu	Phe	Ser	Asp	Gly	Phe	Trp	Thr	Gly	Ser	Gln	Leu	Ala	Cys	Trp	335	340	345
Thr	Asn	Ser	Glu	Thr	Pro	Trp	Ser	Tyr	Phe	Pro	Lys	Ile	Ser	Ile	350	355	360
Tyr	Leu	Arg	Asp	Glu	Asn	Ser	Ser	Arg	Ser	Phe	Arg	Ile	Thr	Ile	365	370	375
Leu	Pro	Gln	Leu	Tyr	Ile	Gln	Pro	Met	Met	Gly	Ala	Gly	Leu	Asn	380	385	390
Tyr	Glu	Cys	Tyr	Arg	Phe	Gly	Ile	Ser	Pro	Ser	Thr	Asn	Ala	Leu			

	395	400	405
Val Ile Gly Ala Thr Val Met Glu Gly Phe Tyr Val Ile Phe Asp	410	415	420
Arg Ala Gln Lys Arg Val Gly Phe Ala Ala Ser Pro Cys Ala Glu	425	430	435
Ile Ala Gly Ala Ala Val Ser Glu Ile Ser Gly Pro Phe Ser Thr	440	445	450
Glu Asp Val Ala Ser Asn Cys Val Pro Ala Gln Ser Leu Ser Glu	455	460	465
Pro Ile Leu Trp Ile Val Ser Tyr Ala Leu Met Ser Val Cys Gly	470	475	480
Ala Ile Leu Leu Val Leu Ile Val Leu Leu Leu Leu Pro Phe Arg	485	490	495
Cys Gln Arg Arg Pro Arg Asp Pro Glu Val Val Asn Asp Glu Ser	500	505	510
Ser Leu Val Arg His Arg Trp Lys	515		

<210> 197  
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 <212> DNA  
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 <223> Synthetic oligonucleotide probe  
  
 <400> 197  
 cgcagaagct acagattctc g 21  
  
 <210> 198  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 198  
 ggaaattgga ggccaaagc 19  
  
 <210> 199  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 199  
 ggatgtagcc agcaactgtg 20

<210> 200  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 200  
gccttggtc gttctcttc 19

<210> 201  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 201  
ggctctgtgc ctggatgg 18

<210> 202  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 202  
gacaagacta cctccgttgg tc 22

<210> 203  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 203  
tgatgcacag ttcagcacct gttg 24

<210> 204  
<211> 47  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 204  
cgctccaagg gctttgacgt cacagtgaag tacacacaag gaagctg 47

<210> 205  
<211> 1939  
<212> DNA

<213> Homo sapiens

<400> 205

cgctccgcc ttccgaggct gacgcgccc ggcgccgttc caggcctgtg 50  
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 ttccgggcgg atgcagggct ggggtcatct gtatctgaag cccctcggaa 1900  
 taaagcgcgt tgaccgccaa aaaaaaaaaa aaaaaaaaaa 1939

<210> 206  
 <211> 377  
 <212> PRT  
 <213> Homo sapiens

<400> 206  
 Met Glu Ala Leu Leu Leu Gly Ala Gly Leu Leu Leu Gly Ala Tyr  
 1 5 10 15  
 Val Leu Val Tyr Tyr Asn Leu Val Lys Ala Pro Pro Cys Gly Gly  
 20 25 30  
 Met Gly Asn Leu Arg Gly Arg Thr Ala Val Val Thr Gly Ala Asn  
 35 40 45  
 Ser Gly Ile Gly Lys Met Thr Ala Leu Glu Leu Ala Arg Arg Gly  
 50 55 60  
 Ala Arg Val Val Leu Ala Cys Arg Ser Gln Glu Arg Gly Glu Ala  
 65 70 75  
 Ala Ala Phe Asp Leu Arg Gln Glu Ser Gly Asn Asn Glu Val Ile  
 80 85 90  
 Phe Met Ala Leu Asp Leu Ala Ser Leu Ala Ser Val Arg Ala Phe  
 95 100 105  
 Ala Thr Ala Phe Leu Ser Ser Glu Pro Arg Leu Asp Ile Leu Ile  
 110 115 120  
 His Asn Ala Gly Ile Ser Ser Cys Gly Arg Thr Arg Glu Ala Phe  
 125 130 135  
 Asn Leu Leu Leu Arg Val Asn His Ile Gly Pro Phe Leu Leu Thr  
 140 145 150

His	Leu	Leu	Leu	Pro	Cys	Leu	Lys	Ala	Cys	Ala	Pro	Ser	Arg	Val	155	160	165
Val	Val	Val	Ala	Ser	Ala	Ala	His	Cys	Arg	Gly	Arg	Leu	Asp	Phe	170	175	180
Lys	Arg	Leu	Asp	Arg	Pro	Val	Val	Gly	Trp	Arg	Gln	Glu	Leu	Arg	185	190	195
Ala	Tyr	Ala	Asp	Thr	Lys	Leu	Ala	Asn	Val	Leu	Phe	Ala	Arg	Glu	200	205	210
Leu	Ala	Asn	Gln	Leu	Glu	Ala	Thr	Gly	Val	Thr	Cys	Tyr	Ala	Ala	215	220	225
His	Pro	Gly	Pro	Val	Asn	Ser	Glu	Leu	Phe	Leu	Arg	His	Val	Pro	230	235	240
Gly	Trp	Leu	Arg	Pro	Leu	Leu	Arg	Pro	Leu	Ala	Trp	Leu	Val	Leu	245	250	255
Arg	Ala	Pro	Arg	Gly	Gly	Ala	Gln	Thr	Pro	Leu	Tyr	Cys	Ala	Leu	260	265	270
Gln	Glu	Gly	Ile	Glu	Pro	Leu	Ser	Gly	Arg	Tyr	Phe	Ala	Asn	Cys	275	280	285
His	Val	Glu	Glu	Val	Pro	Pro	Ala	Ala	Arg	Asp	Asp	Arg	Ala	Ala	290	295	300
His	Arg	Leu	Trp	Glu	Ala	Ser	Lys	Arg	Leu	Ala	Gly	Leu	Gly	Pro	305	310	315
Gly	Glu	Asp	Ala	Glu	Pro	Asp	Glu	Asp	Pro	Gln	Ser	Glu	Asp	Ser	320	325	330
Glu	Ala	Pro	Ser	Ser	Leu	Ser	Thr	Pro	His	Pro	Glu	Glu	Pro	Thr	335	340	345
Val	Ser	Gln	Pro	Tyr	Pro	Ser	Pro	Gln	Ser	Ser	Pro	Asp	Leu	Ser	350	355	360
Lys	Met	Thr	His	Arg	Ile	Gln	Ala	Lys	Val	Glu	Pro	Glu	Ile	Gln	365	370	375

Leu Ser

<210> 207

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 207

cttcattggcc ttggacttgg ccag 24



<210> 208  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 208  
acgccagtgg cctcaagctg gttg 24

<210> 209  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 209  
ctttctgagc tctgagccac ggttgacat cctcatccac aatgc 45

<210> 210  
<211> 3716  
<212> DNA  
<213> Homo sapiens

<400> 210  
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acccccagga ccagctgttc cagggccctg gccctgccag gatgagctgc 150  
caagcctcag gccagccacc tcccaccatc cgctgggttg tgaatgggca 200  
gccctgagc atgggtgccc cagaccaca ccacctcctg cctgatggga 250  
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tggcacggca gtcagcagag gcgctcgggt gtctgtgggt gtcctccggg 400  
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atggtgga aa gatgggaaac ccctggccct ccagcccga aggcacacag 550  
tgtccggggg gtccctgctg atggcaagag cagagaagag tgacgaagg 600  
acctacatgt gtgtggccac caacagcgca ggacatagg agagccgcgc 650  
agcccggtt tccatccagg agccccagga ctacacggag cctgtggagc 700  
ttctggctgt gcgaattcag ctggaaaatg tgacactgct gaaccggat 750



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cccagagaag tcagctccac tgtcgtatgc ccaaggctgg tgcttctcct 3000  
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accattctc ctgtccacc acaagacctg ggctgtgggtg tgtgggtctt 3100  
ggcctgtgtt tctctgcagc tggggtccac ctccccagc ctccagagag 3150  
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tgacctggag ccctcagga gcaaaacatc atctccacct gactcctagc 3250  
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ctgaggagca gccctgcctg ctgctcttcc cccaccattt ggatcacagg 3350  
aagtggagga gccagagggt cctttgtgga ggacagcagt ggctgctggg 3400  
agagggctgt ggaggaagga gcttctcgga gcccctctc agccttacct 3450  
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aagaaaataa ttatgaatgc cactgaggca ctgaggccct acctcatgcc 3550  
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tatgagaccg taggtcaaaa gcaccatcct cgtactgttg tcactatgag 3650

cttaagaaat ttgataccat aaaatggtaa aaaaaaaaaa aaaaaaaaaa 3700

aaaaaaaaaa aaaaaa 3716

<210> 211  
<211> 985  
<212> PRT  
<213> Homo sapiens

<400> 211  
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Pro Gln Asp Gln Leu Phe Gln Gly Pro Gly Pro Ala Arg Met Ser  
20 25 30  
Cys Gln Ala Ser Gly Gln Pro Pro Pro Thr Ile Arg Trp Leu Leu  
35 40 45  
Asn Gly Gln Pro Leu Ser Met Val Pro Pro Asp Pro His His Leu  
50 55 60  
Leu Pro Asp Gly Thr Leu Leu Leu Leu Gln Pro Pro Ala Arg Gly  
65 70 75  
His Ala His Asp Gly Gln Ala Leu Ser Thr Asp Leu Gly Val Tyr  
80 85 90  
Thr Cys Glu Ala Ser Asn Arg Leu Gly Thr Ala Val Ser Arg Gly  
95 100 105  
Ala Arg Leu Ser Val Ala Val Leu Arg Glu Asp Phe Gln Ile Gln  
110 115 120  
Pro Arg Asp Met Val Ala Val Val Gly Glu Gln Phe Thr Leu Glu  
125 130 135  
Cys Gly Pro Pro Trp Gly His Pro Glu Pro Thr Val Ser Trp Trp  
140 145 150  
Lys Asp Gly Lys Pro Leu Ala Leu Gln Pro Gly Arg His Thr Val  
155 160 165  
Ser Gly Gly Ser Leu Leu Met Ala Arg Ala Glu Lys Ser Asp Glu  
170 175 180  
Gly Thr Tyr Met Cys Val Ala Thr Asn Ser Ala Gly His Arg Glu  
185 190 195  
Ser Arg Ala Ala Arg Val Ser Ile Gln Glu Pro Gln Asp Tyr Thr  
200 205 210  
Glu Pro Val Glu Leu Leu Ala Val Arg Ile Gln Leu Glu Asn Val  
215 220 225  
Thr Leu Leu Asn Pro Asp Pro Ala Glu Gly Pro Lys Pro Arg Pro  
230 235 240

Ala	Val	Trp	Leu	Ser	Trp	Lys	Val	Ser	Gly	Pro	Ala	Ala	Pro	Ala	
				245					250					255	
Gln	Ser	Tyr	Thr	Ala	Leu	Phe	Arg	Thr	Gln	Thr	Ala	Pro	Gly	Gly	
				260					265					270	
Gln	Gly	Ala	Pro	Trp	Ala	Glu	Glu	Leu	Leu	Ala	Gly	Trp	Gln	Ser	
				275					280					285	
Ala	Glu	Leu	Gly	Gly	Leu	His	Trp	Gly	Gln	Asp	Tyr	Glu	Phe	Lys	
				290					295					300	
Val	Arg	Pro	Ser	Ser	Gly	Arg	Ala	Arg	Gly	Pro	Asp	Ser	Asn	Val	
				305					310					315	
Leu	Leu	Leu	Arg	Leu	Pro	Glu	Lys	Val	Pro	Ser	Ala	Pro	Pro	Gln	
				320					325					330	
Glu	Val	Thr	Leu	Lys	Pro	Gly	Asn	Gly	Thr	Val	Phe	Val	Ser	Trp	
				335					340					345	
Val	Pro	Pro	Pro	Ala	Glu	Asn	His	Asn	Gly	Ile	Ile	Arg	Gly	Tyr	
				350					355					360	
Gln	Val	Trp	Ser	Leu	Gly	Asn	Thr	Ser	Leu	Pro	Pro	Ala	Asn	Trp	
				365					370					375	
Thr	Val	Val	Gly	Glu	Gln	Thr	Gln	Leu	Glu	Ile	Ala	Thr	His	Met	
				380					385					390	
Pro	Gly	Ser	Tyr	Cys	Val	Gln	Val	Ala	Ala	Val	Thr	Gly	Ala	Gly	
				395					400					405	
Ala	Gly	Glu	Pro	Ser	Arg	Pro	Val	Cys	Leu	Leu	Leu	Glu	Gln	Ala	
				410					415					420	
Met	Glu	Arg	Ala	Thr	Gln	Glu	Pro	Ser	Glu	His	Gly	Pro	Trp	Thr	
				425					430					435	
Leu	Glu	Gln	Leu	Arg	Ala	Thr	Leu	Lys	Arg	Pro	Glu	Val	Ile	Ala	
				440					445					450	
Thr	Cys	Gly	Val	Ala	Leu	Trp	Leu	Leu	Leu	Leu	Gly	Thr	Ala	Val	
				455					460					465	
Cys	Ile	His	Arg	Arg	Arg	Arg	Ala	Arg	Val	His	Leu	Gly	Pro	Gly	
				470					475					480	
Leu	Tyr	Arg	Tyr	Thr	Ser	Glu	Asp	Ala	Ile	Leu	Lys	His	Arg	Met	
				485					490					495	
Asp	His	Ser	Asp	Ser	Gln	Trp	Leu	Ala	Asp	Thr	Trp	Arg	Ser	Thr	
				500					505					510	
Ser	Gly	Ser	Arg	Asp	Leu	Ser	Ser	Ser	Ser	Ser	Leu	Ser	Ser	Arg	
				515					520					525	
Leu	Gly	Ala	Asp	Ala	Arg	Asp	Pro	Leu	Asp	Cys	Arg	Arg	Ser	Leu	

	530		535		540
Leu Ser Trp Asp	Ser Arg Ser Pro Gly	Val Pro Leu Leu Pro	Asp		
	545		550		555
Thr Ser Thr Phe	Tyr Gly Ser Leu Ile	Ala Glu Leu Pro Ser	Ser		
	560		565		570
Thr Pro Ala Arg	Pro Ser Pro Gln Val	Pro Ala Val Arg Arg	Leu		
	575		580		585
Pro Pro Gln Leu	Ala Gln Leu Ser Ser	Pro Cys Ser Ser Ser	Asp		
	590		595		600
Ser Leu Cys Ser	Arg Arg Gly Leu Ser	Ser Pro Arg Leu Ser	Leu		
	605		610		615
Ala Pro Ala Glu	Ala Trp Lys Ala Lys	Lys Lys Gln Glu Leu	Gln		
	620		625		630
His Ala Asn Ser	Ser Pro Leu Leu Arg	Gly Ser His Ser Leu	Glu		
	635		640		645
Leu Arg Ala Cys	Glu Leu Gly Asn Arg	Gly Ser Lys Asn Leu	Ser		
	650		655		660
Gln Ser Pro Gly	Ala Val Pro Gln Ala	Leu Val Ala Trp Arg	Ala		
	665		670		675
Leu Gly Pro Lys	Leu Leu Ser Ser Ser	Asn Glu Leu Val Thr	Arg		
	680		685		690
His Leu Pro Pro	Ala Pro Leu Phe Pro	His Glu Thr Pro Pro	Thr		
	695		700		705
Gln Ser Gln Gln	Thr Gln Pro Pro Val	Ala Pro Gln Ala Pro	Ser		
	710		715		720
Ser Ile Leu Leu	Pro Ala Ala Pro Ile	Pro Ile Leu Ser Pro	Cys		
	725		730		735
Ser Pro Pro Ser	Pro Gln Ala Ser Ser	Leu Ser Gly Pro Ser	Pro		
	740		745		750
Ala Ser Ser Arg	Leu Ser Ser Ser Ser	Leu Ser Ser Leu Gly	Glu		
	755		760		765
Asp Gln Asp Ser	Val Leu Thr Pro Glu	Glu Val Ala Leu Cys	Leu		
	770		775		780
Glu Leu Ser Glu	Gly Glu Glu Thr Pro	Arg Asn Ser Val Ser	Pro		
	785		790		795
Met Pro Arg Ala	Pro Ser Pro Pro Thr	Thr Tyr Gly Tyr Ile	Ser		
	800		805		810
Val Pro Thr Ala	Ser Glu Phe Thr Asp	Met Gly Arg Thr Gly	Gly		
	815		820		825

Gly	Val	Gly	Pro	Lys	Gly	Gly	Val	Leu	Leu	Cys	Pro	Pro	Arg	Pro	
				830					835					840	
Cys	Leu	Thr	Pro	Thr	Pro	Ser	Glu	Gly	Ser	Leu	Ala	Asn	Gly	Trp	
				845					850					855	
Gly	Ser	Ala	Ser	Glu	Asp	Asn	Ala	Ala	Ser	Ala	Arg	Ala	Ser	Leu	
				860					865					870	
Val	Ser	Ser	Ser	Asp	Gly	Ser	Phe	Leu	Ala	Asp	Ala	His	Phe	Ala	
				875					880					885	
Arg	Ala	Leu	Ala	Val	Ala	Val	Asp	Ser	Phe	Gly	Phe	Gly	Leu	Glu	
				890					895					900	
Pro	Arg	Glu	Ala	Asp	Cys	Val	Phe	Ile	Asp	Ala	Ser	Ser	Pro	Pro	
				905					910					915	
Ser	Pro	Arg	Asp	Glu	Ile	Phe	Leu	Thr	Pro	Asn	Leu	Ser	Leu	Pro	
				920					925					930	
Leu	Trp	Glu	Trp	Arg	Pro	Asp	Trp	Leu	Glu	Asp	Met	Glu	Val	Ser	
				935					940					945	
His	Thr	Gln	Arg	Leu	Gly	Arg	Gly	Met	Pro	Pro	Trp	Pro	Pro	Asp	
				950					955					960	
Ser	Gln	Ile	Ser	Ser	Gln	Arg	Ser	Gln	Leu	His	Cys	Arg	Met	Pro	
				965					970					975	
Lys	Ala	Gly	Ala	Ser	Pro	Val	Asp	Tyr	Ser						
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 <212> DNA  
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 <223> Synthetic oligonucleotide probe  
  
 <400> 212  
 gaagggacct acatgtgtgt ggcc 24  
  
 <210> 213  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 213  
 actgaccttc cagctgagcc acac 24  
  
 <210> 214  
 <211> 50  
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 214

aggactacac ggagcctgtg gagcttctgg ctgtgcgaat tcagctggaa 50

<210> 215

<211> 2749

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 1869, 1887

<223> unknown base

<400> 215

ctccacagggt gtccagcgcc cagaatgcgg cttctgggtcc tgctatgggg 50

ttgcttgetg ctccacaggtt atgaagccct ggagggccca gaggaaatca 100

gcggggttcga aggggacact gtgtccctgc agtgcaccta caggaagag 150

ctgaggggacc accggaagta ctggtgcagg aagggtggga tcctcttctc 200

tcgctgctct ggcaccatct atgcagaaga agaaggccag gagacaatga 250

agggcagggt gtccatccgt gacagccgcc aggagctctc gtcattgtg 300

accctgtgga acctcaccct gcaagacgct ggggagtact ggtgtgggg 350

cgaaaaaacgg ggccccgatg agtctttact gatctctctg ttctgtcttc 400

caggaccctg ctgtcctccc tccccttctc ccaccttcca gcctctggct 450

acaacacgcc tgcagcccaa ggcaaaagct cagcaaaccc agcccccagg 500

attgacttct cctgggctct acccggcagc caccacagcc aagcagggga 550

agacaggggc tgaggcccct ccattgccag ggacttccca gtacgggcac 600

gaaaggactt ctcagtacac aggaacctct cctcaccag cgacctctcc 650

tcctgcaggg agctcccgcc ccccatgca gctggactcc acctcagcag 700

aggacaccag tccagctctc agcagtggca gctctaagcc caggggtgtcc 750

atcccgatgg tccgcatact ggccccagtc ctggtgctgc tgagccttct 800

gtcagccgca ggccctgatcg cttctctcag ccacctgctc ctgtggagaa 850

aggaagctca acaggccacg gagacacaga ggaacgagaa gttctggctc 900

tcacgcttga ctgcggagga aaaggaagcc ccttcccagg cccctgaggg 950

ggacgtgatc tcgatgcctc ccctccacac atctgaggag gagctgggct 1000





agagttgttc agtatgcaaa acttggaag atggaggaga aaaagaaaag 2500  
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tttgtgttac ttccttccac tcttttcttc ttcacataat ttgccggtgt 2600  
tctttttaca gagcaattat cttgtatata caactttgta tcctgccttt 2650  
tccaccttat cgttccatca ctttattcca gcacttctct gtgttttaca 2700  
gaccttttta taaataaaat gttcatcagc tgcataaaaa aaaaaaaaaa 2749

<210> 216

<211> 332

<212> PRT

<213> Homo sapiens

<400> 216

Met	Arg	Leu	Leu	Val	Leu	Leu	Trp	Gly	Cys	Leu	Leu	Leu	Pro	Gly	1	5	10	15
Tyr	Glu	Ala	Leu	Glu	Gly	Pro	Glu	Glu	Ile	Ser	Gly	Phe	Glu	Gly	20	25	30	
Asp	Thr	Val	Ser	Leu	Gln	Cys	Thr	Tyr	Arg	Glu	Glu	Leu	Arg	Asp	35	40	45	
His	Arg	Lys	Tyr	Trp	Cys	Arg	Lys	Gly	Gly	Ile	Leu	Phe	Ser	Arg	50	55	60	
Cys	Ser	Gly	Thr	Ile	Tyr	Ala	Glu	Glu	Glu	Gly	Gln	Glu	Thr	Met	65	70	75	
Lys	Gly	Arg	Val	Ser	Ile	Arg	Asp	Ser	Arg	Gln	Glu	Leu	Ser	Leu	80	85	90	
Ile	Val	Thr	Leu	Trp	Asn	Leu	Thr	Leu	Gln	Asp	Ala	Gly	Glu	Tyr	95	100	105	
Trp	Cys	Gly	Val	Glu	Lys	Arg	Gly	Pro	Asp	Glu	Ser	Leu	Leu	Ile	110	115	120	
Ser	Leu	Phe	Val	Phe	Pro	Gly	Pro	Cys	Cys	Pro	Pro	Ser	Pro	Ser	125	130	135	
Pro	Thr	Phe	Gln	Pro	Leu	Ala	Thr	Thr	Arg	Leu	Gln	Pro	Lys	Ala	140	145	150	
Lys	Ala	Gln	Gln	Thr	Gln	Pro	Pro	Gly	Leu	Thr	Ser	Pro	Gly	Leu	155	160	165	
Tyr	Pro	Ala	Ala	Thr	Thr	Ala	Lys	Gln	Gly	Lys	Thr	Gly	Ala	Glu	170	175	180	
Ala	Pro	Pro	Leu	Pro	Gly	Thr	Ser	Gln	Tyr	Gly	His	Glu	Arg	Thr	185	190	195	
Ser	Gln	Tyr	Thr	Gly	Thr	Ser	Pro	His	Pro	Ala	Thr	Ser	Pro	Pro				

	200	205	210
Ala Gly Ser Ser	Arg Pro Pro Met Gln	Leu Asp Ser Thr Ser	Ala
	215	220	225
Glu Asp Thr Ser	Pro Ala Leu Ser Ser	Gly Ser Ser Lys Pro	Arg
	230	235	240
Val Ser Ile Pro	Met Val Arg Ile Leu	Ala Pro Val Leu Val	Leu
	245	250	255
Leu Ser Leu Leu	Ser Ala Ala Gly Leu	Ile Ala Phe Cys Ser	His
	260	265	270
Leu Leu Leu Trp	Arg Lys Glu Ala Gln	Gln Ala Thr Glu Thr	Gln
	275	280	285
Arg Asn Glu Lys	Phe Trp Leu Ser Arg	Leu Thr Ala Glu Glu	Lys
	290	295	300
Glu Ala Pro Ser	Gln Ala Pro Glu Gly	Asp Val Ile Ser Met	Pro
	305	310	315
Pro Leu His Thr	Ser Glu Glu Glu Leu	Gly Phe Ser Lys Phe	Val
	320	325	330

Ser Ala

<210> 217  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 217  
 ccctgcagtg cacctacagg gaag 24

<210> 218  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 218  
 ctgtcttccc ctgcttggct gtgg 24

<210> 219  
 <211> 47  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 219  
gggtgcaggaa ggggtgggatc ctcttctctc gctgctctgg ccacatc 47

<210> 220  
<211> 950  
<212> DNA  
<213> Homo sapiens

<400> 220  
ttgtgactaa aagctggcct agcaggccag ggagtgcagc tgcaggcgtg 50  
gggggtggcag gagccgcaga gccagagcag acagccgaga aacagggtgga 100  
cagtgtgaaa gaaccagtgg tctcgctctg ttgccaggc tagagtgtac 150  
tggcgtgatc atagctcact gcagcctcag actcctggac ttgagaaatc 200  
ctcctgcctt agcctcctgc atatctggga ctccaggggt gcactcaagc 250  
cctgtttctt ctccttctgt gagtggacca cggaggctgg tgagctgcct 300  
gtcatcccaa agctcagctc tgagccagag tgggtggtggc tccacctctg 350  
ccgccggcat agaagccagg agcagggtc tcagaaggcg gtggtgcca 400  
gctgggatca tggtgttggc cctggtctgt ctgctcagct gcctgctacc 450  
ctccagtgag gccaaagtct acggtcgttg tgaactggcc agagtgtac 500  
atgacttcgg gctggacgga taccgggat acagcctggc tgactgggtc 550  
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ggctgatggg agcaccaaca acgggatctt ccagatcaac agccggaggt 650  
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tcagatttgt tgaatcctaa tctcaaggat accgttatct gtgccatgaa 750  
gataacccaa gagcctcagg gtctgggtta ctgggaggcc tggaggcatc 800  
actgccaggg aaaagacctc actgaatggg tggatggctg tgacttctag 850  
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cctaggcttg ggaagacaag ccagcgaata aaggatggtt gaacgtgaaa 950

<210> 221  
<211> 146  
<212> PRT  
<213> Homo sapiens

<400> 221  
Met Leu Leu Ala Leu Val Cys Leu Leu Ser Cys Leu Leu Pro Ser  
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Ser Glu Ala Lys Leu Tyr Gly Arg Cys Glu Leu Ala Arg Val Leu  
20 25 30

His	Asp	Phe	Gly	Leu	Asp	Gly	Tyr	Arg	Gly	Tyr	Ser	Leu	Ala	Asp	35	40	45
Trp	Val	Cys	Leu	Ala	Tyr	Phe	Thr	Ser	Gly	Phe	Asn	Ala	Ala	Ala	50	55	60
Leu	Asp	Tyr	Glu	Ala	Asp	Gly	Ser	Thr	Asn	Asn	Gly	Ile	Phe	Gln	65	70	75
Ile	Asn	Ser	Arg	Arg	Trp	Cys	Ser	Asn	Leu	Thr	Pro	Asn	Val	Pro	80	85	90
Asn	Val	Cys	Arg	Met	Tyr	Cys	Ser	Asp	Leu	Leu	Asn	Pro	Asn	Leu	95	100	105
Lys	Asp	Thr	Val	Ile	Cys	Ala	Met	Lys	Ile	Thr	Gln	Glu	Pro	Gln	110	115	120
Gly	Leu	Gly	Tyr	Trp	Glu	Ala	Trp	Arg	His	His	Cys	Gln	Gly	Lys	125	130	135
Asp	Leu	Thr	Glu	Trp	Val	Asp	Gly	Cys	Asp	Phe					140	145	

<210> 222  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 222  
 gggatcatgt tggtggccct ggtc 24  
  
 <210> 223  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 223  
 gcaaggcaga cccagtcagc cag 23  
  
 <210> 224  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 224  
 ctgcctgcta ccctccaagt gaggccaagc tctacggtcg ttgtg 45  
  
 <210> 225

<211> 2049  
<212> DNA  
<213> Homo sapiens

<400> 225

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cgagcaactg gctgtacctg gccaaactgt cgtcgggtggg gagcatctca 150  
gaggaggaga cgtgcgagaa actcaagggc ctgatccaga ggcagggtgca 200  
gatgtgcaag cggaacctgg aagtcattga ctccgtgcgc cgcgggtgcc 250  
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tgctccacac tcgactcctt gcccgctcttc ggcaagggtg tgacgcaagg 350  
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ctgccactga ccaaagggac cttgctcgtg ccgctggctg cccgcatgtg 1350

gctgccactg accactcagt tggtatctgt gtccgttttt ctacttgcag 1400  
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 atggaagtca caccctctgg aaaaaagaac tcttaactct ccagcacaca 1550  
 tacacatgga ctcttggcag cttgagccta gaagccatgt ctctcaaagt 1600  
 ccctgagaaa gggaacaagc agataccagg tcaagggcac caggttcatt 1650  
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 agaccacact aggcaggcat ataggctgcc atcctggacc agggatcccc 1850  
 gctgtgcctt tgcagtcagt cccgagtcac ctttcacagc gctgttcctc 1900  
 catgaaactg aaaaacacac acacacacac acacacacac acacacacac 1950  
 acacacacac ggacacacac acacacctgc gagagagagg gaggaaaggg 2000  
 ctgtgccttt gcagtcatgc ccgagtcacc tttcacagca ctgttcctc 2049

<210> 226  
 <211> 351  
 <212> PRT  
 <213> Homo sapiens

<400> 226  
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 1 5 10 15  
 Ala Val Phe Ser Ala Ala Ala Ser Asn Trp Leu Tyr Leu Ala Lys  
 20 25 30  
 Leu Ser Ser Val Gly Ser Ile Ser Glu Glu Glu Thr Cys Glu Lys  
 35 40 45  
 Leu Lys Gly Leu Ile Gln Arg Gln Val Gln Met Cys Lys Arg Asn  
 50 55 60  
 Leu Glu Val Met Asp Ser Val Arg Arg Gly Ala Gln Leu Ala Ile  
 65 70 75  
 Glu Glu Cys Gln Tyr Gln Phe Arg Asn Arg Arg Trp Asn Cys Ser  
 80 85 90  
 Thr Leu Asp Ser Leu Pro Val Phe Gly Lys Val Val Thr Gln Gly  
 95 100 105  
 Thr Arg Glu Ala Ala Phe Val Tyr Ala Ile Ser Ser Ala Gly Val  
 110 115 120

Ala Phe Ala Val Thr Arg Ala Cys Ser Ser Gly Glu Leu Glu Lys	125	130	135
Cys Gly Cys Asp Arg Thr Val His Gly Val Ser Pro Gln Gly Phe	140	145	150
Gln Trp Ser Gly Cys Ser Asp Asn Ile Ala Tyr Gly Val Ala Phe	155	160	165
Ser Gln Ser Phe Val Asp Val Arg Glu Arg Ser Lys Gly Ala Ser	170	175	180
Ser Ser Arg Ala Leu Met Asn Leu His Asn Asn Glu Ala Gly Arg	185	190	195
Lys Ala Ile Leu Thr His Met Arg Val Glu Cys Lys Cys His Gly	200	205	210
Val Ser Gly Ser Cys Glu Val Lys Thr Cys Trp Arg Ala Val Pro	215	220	225
Pro Phe Arg Gln Val Gly His Ala Leu Lys Glu Lys Phe Asp Gly	230	235	240
Ala Thr Glu Val Glu Pro Arg Arg Val Gly Ser Ser Arg Ala Leu	245	250	255
Val Pro Arg Asn Ala Gln Phe Lys Pro His Thr Asp Glu Asp Leu	260	265	270
Val Tyr Leu Glu Pro Ser Pro Asp Phe Cys Glu Gln Asp Met Arg	275	280	285
Ser Gly Val Leu Gly Thr Arg Gly Arg Thr Cys Asn Lys Thr Ser	290	295	300
Lys Ala Ile Asp Gly Cys Glu Leu Leu Cys Cys Gly Arg Gly Phe	305	310	315
His Thr Ala Gln Val Glu Leu Ala Glu Arg Cys Ser Cys Lys Phe	320	325	330
His Trp Cys Cys Phe Val Lys Cys Arg Gln Cys Gln Arg Leu Val	335	340	345
Glu Leu His Thr Cys Arg	350		

<210> 227

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 227

gctgcagctg caaattccac tgg 23



<210> 228  
<211> 28  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 228  
tggtgggaga ctgtttaaat tatcggcc 28

<210> 229  
<211> 41  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 229  
tgcttcgtca agtgccggca gtgccagcgg ctctgtggagt t 41

<210> 230  
<211> 1355  
<212> DNA  
<213> Homo sapiens

<400> 230  
cggacgcgtg ggcggacgcg tgggcggacg cgtgggcgga cgcgtgggct 50  
gggtgcctgc atcgccatgg acaccaccag gtacagcaag tggggcggca 100  
gctccgagga ggtccccgga gggccctggg gacgctgggt gactggagc 150  
aggagacccc tcttcttggc cctggctgtc ctggtcacca cagtcctttg 200  
ggctgtgatt ctgagtatcc tattgtccaa ggcctccacg gagcgcgcgg 250  
cgctgcttga cggccacgac ctgctgagga caaacgcctc gaagcagacg 300  
gcggcgctgg gtgccctgaa ggaggaggtc ggagactgcc acagctgctg 350  
ctcggggacg caggcgcagc tgcagaccac gcgcgcggag cttggggagg 400  
cgcaggcgaa gctgatggag caggagagcg ccctgcggga actgcgtgag 450  
cgcgtgaccc agggcttggc tgaagccggc aggggccgtg aggacgtccg 500  
cactgagctg ttccggggcg tggaggccgt gaggtccag aacaactcct 550  
gcgagccgtg cccacgctcg tggctgtcct tcgagggtc ctgctacttt 600  
ttctctgtgc caaagacgac gtgggcggcg gcgcaggatc actgcgcaga 650  
tgccagcgcg cacctggtga tcgttggggg cctggatgag cagggttcc 700  
tcactcgaa cacgcgtggc cgtggttact ggctgggcct gagggctgtg 750

cgccatctgg gcaaggttca gggctaccag tgggtggacg gagtctctct 800  
cagcttcagc cactggaacc agggagagcc caatgacgct tgggggcgcg 850  
agaactgtgt catgatgctg cacacggggc tgtggaacga cgcaccgtgt 900  
gacagcgaga aggacggctg gatctgtgag aaaaggcaca actgctgacc 950  
ccgcccagtg ccctggagcc gcgcccattg cagcatgtcg tatcctgggg 1000  
gctgctcacc tccctggctc ctggagctga ttgccaaaga gtttttttct 1050  
tctcatcca ccgctgctga gtctcagaaa cacttggtccc aacatagccc 1100  
tgtccagccc agtgccctggg ctctggggacc tccatgccga cctcatccta 1150  
actccactca cgcagaccca acctaacctc cactagctcc aaaatccctg 1200  
ctcctgcgtc cccgtgatat gcctccactt ctctccctaa ccaaggtag 1250  
gtgactgagg actggagctg tttggttttc tcgcattttc caccaaactg 1300  
gaagctgttt ttgcagcctg aggaagcatc aataaatatt tgagaaatga 1350  
aaaaa 1355

<210> 231  
<211> 293  
<212> PRT  
<213> Homo sapiens

<400> 231  
Met Asp Thr Thr Arg Tyr Ser Lys Trp Gly Gly Ser Ser Glu Glu  
1 5 10 15  
Val Pro Gly Gly Pro Trp Gly Arg Trp Val His Trp Ser Arg Arg  
20 25 30  
Pro Leu Phe Leu Ala Leu Ala Val Leu Val Thr Thr Val Leu Trp  
35 40 45  
Ala Val Ile Leu Ser Ile Leu Leu Ser Lys Ala Ser Thr Glu Arg  
50 55 60  
Ala Ala Leu Leu Asp Gly His Asp Leu Leu Arg Thr Asn Ala Ser  
65 70 75  
Lys Gln Thr Ala Ala Leu Gly Ala Leu Lys Glu Glu Val Gly Asp  
80 85 90  
Cys His Ser Cys Cys Ser Gly Thr Gln Ala Gln Leu Gln Thr Thr  
95 100 105  
Arg Ala Glu Leu Gly Glu Ala Gln Ala Lys Leu Met Glu Gln Glu  
110 115 120  
Ser Ala Leu Arg Glu Leu Arg Glu Arg Val Thr Gln Gly Leu Ala  
125 130 135

Glu	Ala	Gly	Arg	Gly	Arg	Glu	Asp	Val	Arg	Thr	Glu	Leu	Phe	Arg	140	145	150
Ala	Leu	Glu	Ala	Val	Arg	Leu	Gln	Asn	Asn	Ser	Cys	Glu	Pro	Cys	155	160	165
Pro	Thr	Ser	Trp	Leu	Ser	Phe	Glu	Gly	Ser	Cys	Tyr	Phe	Phe	Ser	170	175	180
Val	Pro	Lys	Thr	Thr	Trp	Ala	Ala	Ala	Gln	Asp	His	Cys	Ala	Asp	185	190	195
Ala	Ser	Ala	His	Leu	Val	Ile	Val	Gly	Gly	Leu	Asp	Glu	Gln	Gly	200	205	210
Phe	Leu	Thr	Arg	Asn	Thr	Arg	Gly	Arg	Gly	Tyr	Trp	Leu	Gly	Leu	215	220	225
Arg	Ala	Val	Arg	His	Leu	Gly	Lys	Val	Gln	Gly	Tyr	Gln	Trp	Val	230	235	240
Asp	Gly	Val	Ser	Leu	Ser	Phe	Ser	His	Trp	Asn	Gln	Gly	Glu	Pro	245	250	255
Asn	Asp	Ala	Trp	Gly	Arg	Glu	Asn	Cys	Val	Met	Met	Leu	His	Thr	260	265	270
Gly	Leu	Trp	Asn	Asp	Ala	Pro	Cys	Asp	Ser	Glu	Lys	Asp	Gly	Trp	275	280	285
Ile	Cys	Glu	Lys	Arg	His	Asn	Cys								290		

<210> 232  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 232  
 gcgagaactg tgatcatgatg ctgc 24  
  
 <210> 233  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 233  
 gttttctgaga ctcagcagcg gtgg 24  
  
 <210> 234  
 <211> 50  
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 234

caccgtgtga cagcgagaag gacggctgga tctgtgagaa aaggcacaac 50

<210> 235

<211> 1847

<212> DNA

<213> Homo sapiens

<400> 235

gccaggggaa gagggatgac cgacccgggg aaggctgctg ggcagggcga 50

gttgggaaag cggcagcccc cgccgcccc gcagcccctt ctctccttt 100

ctcccacgtc ctatctgcct ctctgctggag gccagggcgt gcagcatcga 150

agacaggagg aactggagcc tcattggccg gcccggggag ccggcctcgg 200

gcttaaataag gagctccggg ctctggctgg gacccgaccg ctgccggccg 250

cgctcccgt gctcctgccg ggtgatggaa aacccagacc cggccgccgc 300

cctgggcaag gccctctgcg ctctcctcct ggccactctc ggccgccgcg 350

gccagcctct tgggggagag tccatctgtt ccgccagagc cccggccaaa 400

tacagcatca ccttcacggg caagtggagc cagacggcct tccccaaagca 450

gtaccccctg ttccgcccc ctgcgcagtg gtcttcgctg ctggggggccg 500

cgcatagctc cgactacagc atgtggagga agaaccagta cgtcagtaac 550

gggctgcgcg actttgcgga gcgcggcgag gctggggcgc tgatgaagga 600

gacgcaggcg gcgggggagg cgctgcagag cgtgcacgag gtgttttcgg 650

cgcccgccgt cccagcggc accgggcaga cgtcggcgga gctggagggtg 700

cagcgcaggc actcgtcgtt ctctgttggt gtgcgcacgc tgcccagccc 750

cgactgggtc gtgggcgtgg acagcctgga cctgtgcgac ggggaccggt 800

ggcgggaaca ggcggcgctg gacctgtacc cctacgacgc cgggacggac 850

agcggcttca ccttctctc ccccaacttc gccaccatcc cgcaggacac 900

ggtgaccgag ataacgtcct cctctcccag ccacccggcc aactccttct 950

actacccgcg gctgaaggcc ctgcctccca tcgccagggt gacactgctg 1000

cggctgcgac agagccccag ggccttcac cctcccgccc cagtctctgc 1050

cagcagggac aatgagattg tagacagcgc ctacagttcca gaaacgccgc 1100

tggactgcga ggtctccctg tggctcgtcct ggggactgtg cggaggccac 1150  
 tgtgggagggc tggggaccaa gagcaggact cgctacgtcc ggggccagcc 1200  
 cgccaacaac gggagcccct gccccgagct cgaagaagag gctgagtgcg 1250  
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 cagctactct aaattatgtc tccttataag ttattgctgc tccaggagat 1600  
 tgtccttcat cgtccagggg cctgggtccc acgtgggtgc agatacctca 1650  
 gacctggtgc tctaggctgt gctgagccca ctctcccgag ggcgcatcca 1700  
 agcggggggc acttgagaag tgaataaatg gggcggtttc ggaagcgtca 1750  
 gtgtttccat gttatggatc tctctgcgtt tgaataaaga ctatctctgt 1800  
 tgctcacaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa 1847

<210> 236

<211> 331

<212> PRT

<213> Homo sapiens

<400> 236

Met	Glu	Asn	Pro	Ser	Pro	Ala	Ala	Ala	Leu	Gly	Lys	Ala	Leu	Cys	1	5	10	15
Ala	Leu	Leu	Leu	Ala	Thr	Leu	Gly	Ala	Ala	Gly	Gln	Pro	Leu	Gly	20	25	30	
Gly	Glu	Ser	Ile	Cys	Ser	Ala	Arg	Ala	Pro	Ala	Lys	Tyr	Ser	Ile	35	40	45	
Thr	Phe	Thr	Gly	Lys	Trp	Ser	Gln	Thr	Ala	Phe	Pro	Lys	Gln	Tyr	50	55	60	
Pro	Leu	Phe	Arg	Pro	Pro	Ala	Gln	Trp	Ser	Ser	Leu	Leu	Gly	Ala	65	70	75	
Ala	His	Ser	Ser	Asp	Tyr	Ser	Met	Trp	Arg	Lys	Asn	Gln	Tyr	Val	80	85	90	
Ser	Asn	Gly	Leu	Arg	Asp	Phe	Ala	Glu	Arg	Gly	Glu	Ala	Trp	Ala	95	100	105	
Leu	Met	Lys	Glu	Ile	Glu	Ala	Ala	Gly	Glu	Ala	Leu	Gln	Ser	Val				

	110	115	120
His Glu Val Phe	Ser Ala Pro Ala Val	Pro Ser Gly Thr Gly	Gln
	125	130	135
Thr Ser Ala Glu	Leu Glu Val Gln Arg	Arg His Ser Leu Val	Ser
	140	145	150
Phe Val Val Arg	Ile Val Pro Ser Pro	Asp Trp Phe Val Gly	Val
	155	160	165
Asp Ser Leu Asp	Leu Cys Asp Gly Asp	Arg Trp Arg Glu Gln	Ala
	170	175	180
Ala Leu Asp Leu	Tyr Pro Tyr Asp Ala	Gly Thr Asp Ser Gly	Phe
	185	190	195
Thr Phe Ser Ser	Pro Asn Phe Ala Thr	Ile Pro Gln Asp Thr	Val
	200	205	210
Thr Glu Ile Thr	Ser Ser Ser Pro Ser	His Pro Ala Asn Ser	Phe
	215	220	225
Tyr Tyr Pro Arg	Leu Lys Ala Leu Pro	Pro Ile Ala Arg Val	Thr
	230	235	240
Leu Leu Arg Leu	Arg Gln Ser Pro Arg	Ala Phe Ile Pro Pro	Ala
	245	250	255
Pro Val Leu Pro	Ser Arg Asp Asn Glu	Ile Val Asp Ser Ala	Ser
	260	265	270
Val Pro Glu Thr	Pro Leu Asp Cys Glu	Val Ser Leu Trp Ser	Ser
	275	280	285
Trp Gly Leu Cys	Gly Gly His Cys Gly	Arg Leu Gly Thr Lys	Ser
	290	295	300
Arg Thr Arg Tyr	Val Arg Val Gln Pro	Ala Asn Asn Gly Ser	Pro
	305	310	315
Cys Pro Glu Leu	Glu Glu Glu Ala Glu	Cys Val Pro Asp Asn	Cys
	320	325	330

Val

<210> 237

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 237

cagcactgcc aggggaagag gg 22

<210> 238  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 238  
caggactcgc tacgtccg 18

<210> 239  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 239  
cagcccccttc tcctcctttc tccc 24

<210> 240  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 240  
gcagttatca gggacgcact cagcc 25

<210> 241  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 241  
ccagcgagag gcagatag 18

<210> 242  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 242  
cggtcaccgt gtccctgcggg atg 23

<210> 243  
<211> 42  
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 243

cagcccccttc tccctcctttc tcccacgtcc tatctgcctc tc 42

<210> 244

<211> 1894

<212> DNA

<213> Homo sapiens

<400> 244

ggcggcgtcc gtgaggggct cctttgggca ggggtagtgt ttggtgtccc 50  
tgtcttgctg gatattgaca aactgaagct ttcttgccacc actggactta 100  
aggaagagtg tactcgtagg cggacagctt tagtggccgg ccggccgctc 150  
tcatcccccg taaggagcag agtcctttgt actgaccaag atgagcaaca 200  
tctacatcca ggagcctccc acgaatggga aggttttatt gaaaactaca 250  
gctggagata ttgacataga gttgtgggtcc aaagaagctc cttaaagcttg 300  
cagaaatttt atccaacttt gtttggaagc ttattatgac aataccattt 350  
ttcatagagt tgtgcctggc ttcatagtcc aaggcggaga tcctactggc 400  
acaggagagt gtggagagtc tatctatgga gcgccattca aagatgaatt 450  
tcattcacgg ttgcgtttta atcggagagg actgggttgcc atggcaaagt 500  
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gaccacataa tccacacaaa ataaaaagct gtgagggtttt gtttaatcct 700  
tttgatgaca tcattccaag ggaaattaaa aggctgaaaa aagagaaacc 750  
agaggaggaa gtaaagaaat tgaaacccaa aggcacaaaa aatttttagtt 800  
tactttcatt tggagaggaa gctgaggaag aagaggagga agtaaatacga 850  
gttagtcaga gcatgaaggc caaaagcaaa agtagtcatg acttgcttaa 900  
ggatgatcca catctcagtt ctgttccagt tgtagaaagt gaaaaagggtg 950  
atgcaccaga tttagttgat gatggagaag atgaaagtgc agagcatgat 1000  
gaatatattg atggtgatga aaagaacctg atgagagaaa gaattgccaa 1050  
aaaattaaaa aaggacacaa gtgcgaatgt taaatcagct ggagaaggag 1100



aagtggagaa gaaatcagtc agccgcagtg aagagctcag aaaagaagca 1150  
agacaattaa aacgggaact cttagcagca aaacaaaaaa aagtagaaaa 1200  
tgcagcaaaa caagcagaaa aaagaagtga agaggaagaa gcccctccag 1250  
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ataaaagaag gaggaagaa agcaaaaagc tgatgagaga gaaaaaagaa 1600  
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acaatggcct tgtaacagcc attgttccca acagcatcac ttaggggtgt 1700  
gaaaagaagt atttttgaac ctggtgtctg gttttgaaaa acaattatct 1750  
tgttttgcaa attgtggaat gatgtaagca aatgcttttg gttactggta 1800  
catgtgtttt ttctagctg accttttata ttgctaaatc tgaaataaaa 1850  
taactttcct tccacaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1894

<210> 245

<211> 472

<212> PRT

<213> Homo sapiens

<400> 245

Met	Ser	Asn	Ile	Tyr	Ile	Gln	Glu	Pro	Pro	Thr	Asn	Gly	Lys	Val
1				5					10					15

Leu	Leu	Lys	Thr	Thr	Ala	Gly	Asp	Ile	Asp	Ile	Glu	Leu	Trp	Ser
				20					25					30

Lys	Glu	Ala	Pro	Lys	Ala	Cys	Arg	Asn	Phe	Ile	Gln	Leu	Cys	Leu
				35					40					45

Glu	Ala	Tyr	Tyr	Asp	Asn	Thr	Ile	Phe	His	Arg	Val	Val	Pro	Gly
				50					55					60

Phe	Ile	Val	Gln	Gly	Gly	Asp	Pro	Thr	Gly	Thr	Gly	Ser	Gly	Gly
				65					70					75

Glu	Ser	Ile	Tyr	Gly	Ala	Pro	Phe	Lys	Asp	Glu	Phe	His	Ser	Arg
				80					85					90

Leu	Arg	Phe	Asn	Arg	Arg	Gly	Leu	Val	Ala	Met	Ala	Asn	Ala	Gly
				95					100					105

Ser	His	Asp	Asn	Gly	Ser	Gln	Phe	Phe	Phe	Thr	Leu	Gly	Arg	Ala	110	115	120
Asp	Glu	Leu	Asn	Asn	Lys	His	Thr	Ile	Phe	Gly	Lys	Val	Thr	Gly	125	130	135
Asp	Thr	Val	Tyr	Asn	Met	Leu	Arg	Leu	Ser	Glu	Val	Asp	Ile	Asp	140	145	150
Asp	Asp	Glu	Arg	Pro	His	Asn	Pro	His	Lys	Ile	Lys	Ser	Cys	Glu	155	160	165
Val	Leu	Phe	Asn	Pro	Phe	Asp	Asp	Ile	Ile	Pro	Arg	Glu	Ile	Lys	170	175	180
Arg	Leu	Lys	Lys	Glu	Lys	Pro	Glu	Glu	Glu	Val	Lys	Lys	Leu	Lys	185	190	195
Pro	Lys	Gly	Thr	Lys	Asn	Phe	Ser	Leu	Leu	Ser	Phe	Gly	Glu	Glu	200	205	210
Ala	Glu	Glu	Glu	Glu	Glu	Glu	Val	Asn	Arg	Val	Ser	Gln	Ser	Met	215	220	225
Lys	Gly	Lys	Ser	Lys	Ser	Ser	His	Asp	Leu	Leu	Lys	Asp	Asp	Pro	230	235	240
His	Leu	Ser	Ser	Val	Pro	Val	Val	Glu	Ser	Glu	Lys	Gly	Asp	Ala	245	250	255
Pro	Asp	Leu	Val	Asp	Asp	Gly	Glu	Asp	Glu	Ser	Ala	Glu	His	Asp	260	265	270
Glu	Tyr	Ile	Asp	Gly	Asp	Glu	Lys	Asn	Leu	Met	Arg	Glu	Arg	Ile	275	280	285
Ala	Lys	Lys	Leu	Lys	Lys	Asp	Thr	Ser	Ala	Asn	Val	Lys	Ser	Ala	290	295	300
Gly	Glu	Gly	Glu	Val	Glu	Lys	Lys	Ser	Val	Ser	Arg	Ser	Glu	Glu	305	310	315
Leu	Arg	Lys	Glu	Ala	Arg	Gln	Leu	Lys	Arg	Glu	Leu	Leu	Ala	Ala	320	325	330
Lys	Gln	Lys	Lys	Val	Glu	Asn	Ala	Ala	Lys	Gln	Ala	Glu	Lys	Arg	335	340	345
Ser	Glu	Glu	Glu	Glu	Ala	Pro	Pro	Asp	Gly	Ala	Val	Ala	Glu	Tyr	350	355	360
Arg	Arg	Glu	Lys	Gln	Lys	Tyr	Glu	Ala	Leu	Arg	Lys	Gln	Gln	Ser	365	370	375
Lys	Lys	Gly	Thr	Ser	Arg	Glu	Asp	Gln	Thr	Leu	Ala	Leu	Leu	Asn	380	385	390
Gln	Phe	Lys	Ser	Lys	Leu	Thr	Gln	Ala	Ile	Ala	Glu	Thr	Pro	Glu			

395	400	405
Asn Asp Ile Pro Glu Thr Glu Val Glu Asp Asp Glu Gly Trp Met		
410	415	420
Ser His Val Leu Gln Phe Glu Asp Lys Ser Arg Lys Val Lys Asp		
425	430	435
Ala Ser Met Gln Asp Ser Asp Thr Phe Glu Ile Tyr Asp Pro Arg		
440	445	450
Asn Pro Val Asn Lys Arg Arg Arg Glu Glu Ser Lys Lys Leu Met		
455	460	465
Arg Glu Lys Lys Glu Arg Arg		
470		

<210> 246  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 246  
 tgcggagatc ctactggcac aggg 24

<210> 247  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 247  
 cgagttagtc agagcatg 18

<210> 248  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 248  
 cagatggtgc tggtgccg 18

<210> 249  
 <211> 29  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 249  
caactggaac aggaactgag atgtggatc 29

<210> 250  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 250  
ctggttcagc agtgcaaggg tctg 24

<210> 251  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 251  
cctctccgat taaaacgc 18

<210> 252  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 252  
gagaggactg gttgccatgg caaatgctgg ttctcatgat aatgg 45

<210> 253  
<211> 2456  
<212> DNA  
<213> Homo sapiens

<400> 253  
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catttcgcct tgetgacggc gtcgagccct ggccagacat gtccacaggg 150  
ttctccttcg ggtccgggac tctgggctcc accaccgtgg ccgccggcgg 200  
gaccagcaca ggcggcgttt tctccttcgg aacgggaacg tctagcaacc 250  
cttctgtggg gctcaatttt ggaaatcttg gaagtacttc aactccagca 300  
actacatctg ctccctcaag tggttttgga accgggctct ttggatctaa 350  
acctgccact gggttcactc taggaggaac aaatacaggt gccttgcaca 400



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 ccaccccagt ttagaactgc aggagctccc tgctgcctcc aggccaaagc 2000  
 tagagctttt gcctgttgtg tgggacctgc actgcccttt ccagcctgac 2050  
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 ctgtcaacac cacactgtgc tcagctctcc agcctcagga caacctcttt 2150  
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 tggcctggag gcctagggca ggttgtgaca tggagcaaac ttttggtagt 2350  
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 aaaaaa 2456

<210> 254  
 <211> 545  
 <212> PRT  
 <213> Homo sapiens

<400> 254  
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 Thr Val Ala Ala Gly Gly Thr Ser Thr Gly Gly Val Phe Ser Phe  
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 35 40 45  
 Asn Leu Gly Ser Thr Ser Thr Pro Ala Thr Thr Ser Ala Pro Ser  
 50 55 60  
 Ser Gly Phe Gly Thr Gly Leu Phe Gly Ser Lys Pro Ala Thr Gly  
 65 70 75  
 Phe Thr Leu Gly Gly Thr Asn Thr Gly Ala Leu His Thr Lys Arg  
 80 85 90  
 Pro Gln Val Val Thr Lys Tyr Gly Thr Leu Gln Gly Lys Gln Met  
 95 100 105  
 His Val Gly Lys Thr Pro Ile Gln Val Phe Leu Gly Val Pro Phe  
 110 115 120  
 Ser Arg Pro Pro Leu Gly Ile Leu Arg Phe Ala Pro Pro Glu Pro  
 125 130 135

Pro	Glu	Pro	Trp	Lys	Gly	Ile	Arg	Asp	Ala	Thr	Thr	Tyr	Pro	Pro	140	145	150
Gly	Trp	Ser	Leu	Ala	Leu	Ser	Pro	Gly	Trp	Ser	Ala	Val	Ala	Arg	155	160	165
Ser	Arg	Leu	Thr	Ala	Thr	Ser	Ala	Ser	Arg	Val	Gln	Ala	Ser	Leu	170	175	180
Leu	Pro	Gln	Pro	Leu	Ser	Val	Trp	Gly	Tyr	Arg	Cys	Leu	Gln	Glu	185	190	195
Ser	Trp	Gly	Gln	Leu	Ala	Ser	Met	Tyr	Val	Ser	Thr	Arg	Glu	Arg	200	205	210
Tyr	Lys	Trp	Leu	Arg	Phe	Ser	Glu	Asp	Cys	Leu	Tyr	Leu	Asn	Val	215	220	225
Tyr	Ala	Pro	Ala	Arg	Ala	Pro	Gly	Asp	Pro	Gln	Leu	Pro	Val	Met	230	235	240
Val	Trp	Phe	Pro	Gly	Gly	Ala	Phe	Ile	Val	Gly	Ala	Ala	Ser	Ser	245	250	255
Tyr	Glu	Gly	Ser	Asp	Leu	Ala	Ala	Arg	Glu	Lys	Val	Val	Leu	Val	260	265	270
Phe	Leu	Gln	His	Arg	Leu	Gly	Ile	Phe	Gly	Phe	Leu	Ser	Thr	Asp	275	280	285
Asp	Ser	His	Ala	Arg	Gly	Asn	Trp	Gly	Leu	Leu	Asp	Gln	Met	Ala	290	295	300
Ala	Leu	Arg	Trp	Val	Gln	Glu	Asn	Ile	Ala	Ala	Phe	Gly	Gly	Asp	305	310	315
Pro	Gly	Asn	Val	Thr	Leu	Phe	Gly	Gln	Ser	Ala	Gly	Ala	Met	Ser	320	325	330
Ile	Ser	Gly	Leu	Met	Met	Ser	Pro	Leu	Ala	Ser	Gly	Leu	Phe	His	335	340	345
Arg	Ala	Ile	Ser	Gln	Ser	Gly	Thr	Ala	Leu	Phe	Arg	Leu	Phe	Ile	350	355	360
Thr	Ser	Asn	Pro	Leu	Lys	Val	Ala	Lys	Lys	Val	Ala	His	Leu	Ala	365	370	375
Gly	Cys	Asn	His	Asn	Ser	Thr	Gln	Ile	Leu	Val	Asn	Cys	Leu	Arg	380	385	390
Ala	Leu	Ser	Gly	Thr	Lys	Val	Met	Arg	Val	Ser	Asn	Lys	Met	Arg	395	400	405
Phe	Leu	Gln	Leu	Asn	Phe	Gln	Arg	Asp	Pro	Glu	Glu	Ile	Ile	Trp	410	415	420
Ser	Met	Ser	Pro	Val	Val	Asp	Gly	Val	Val	Ile	Pro	Asp	Asp	Pro			

	425		430		435
Leu Val Leu Leu Thr Gln Gly Lys Val Ser Ser Val Pro Tyr Leu					
	440		445		450
Leu Gly Val Asn Asn Leu Glu Phe Asn Trp Leu Leu Pro Tyr Asn					
	455		460		465
Ile Thr Lys Glu Gln Val Pro Leu Val Val Glu Glu Tyr Leu Asp					
	470		475		480
Asn Val Asn Glu His Asp Trp Lys Met Leu Arg Asn Arg Met Met					
	485		490		495
Asp Ile Val Gln Asp Ala Thr Phe Val Tyr Ala Thr Leu Gln Thr					
	500		505		510
Ala His Tyr His Arg Glu Thr Pro Met Met Gly Ile Cys Pro Ala					
	515		520		525
Gly His Ala Thr Thr Arg Met Lys Ser Thr Cys Ser Trp Ile Leu					
	530		535		540
Pro Gln Glu Trp Ala					
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<210> 255

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 255

aggtgcctgc aggagtcctg ggg 23

<210> 256

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 256

ccacctcagg aagccgaaga tgcc 24

<210> 257

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 257

gaacggtaca agtggctgcg cttcagcgag gactgtctgt acctg 45



<210> 258  
<211> 2764  
<212> DNA  
<213> Homo sapiens

<400> 258  
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actgccactg ctgctgtcct cgctgctggg cgggtcccag gctatggatg 100  
ggagattctg gatacgagtg caggagtcag tgatgggtgcc ggagggcctg 150  
tgcattcttg tgccttgcct tttctcctac ccccgacaag actggacagg 200  
gtctacccca gcttatggct actgggtcaa agcagtgact gagacaacca 250  
aggggtgctcc tgtggccaca aaccaccaga gtcgagaggt ggaaatgagc 300  
acccggggcc gattccagct cactggggat cccgccaagg ggaactgctc 350  
cttgggtgatc agagacgcgc agatgcagga tgagtcacag tactttcttc 400  
gggtggagag aggaagctat gtgacatata atttcatgaa cgatgggttc 450  
tttctaaaag taacagtgtc cagcttcacg cccagacccc aggaccacaa 500  
caccgacctc acctgccatg tggacttctc cagaaagggg gtgagcgcac 550  
agaggaccgt ccgactccgt gtggcctatg cccccagaga ccttgttatc 600  
agcatttcac gtgacaacac gccagccctg gagccccagc cccagggaaa 650  
tgtcccatac ctggaagccc aaaaaggcca gttcctgcgg ctctctctgtg 700  
ctgctgacag ccagccccct gccacactga gctgggtcct gcagaacaga 750  
gtcctctcct cgtcccatcc ctggggccct agaccctgg ggctggagct 800  
gcccgggggtg aaggctgggg attcagggcg ctacacctgc cgagcggaga 850  
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ccagagaacc tgagagtgat ggtttcccaa gcaaacagga cagtcctgga 950  
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aatcggcata acggctcttc ttttctctg cctggccctg atcatcatga 1300

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 ccccttggtc cagaagcgga atcagaaagc cacaccaaac agtcctcgga 1450  
 cccctcctcc accaggtgct ccctccccag aatcaaagaa gaaccagaaa 1500  
 aagcagtatc agttgcccgag tttcccagaa cccaaatcat cactcaagc 1550  
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 tcgggagttc gagaccagcc tggccaactt ggtgaaacc cgtctctact 1950  
 aaaaatacaa aaattagctg ggcattggtg caggcgctg taatcctacc 2000  
 tacttgggaa gctgaggcag gagaatcact tgaacctggg agacggaggt 2050  
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 ccagcactt tgggaggcta aggtgggtg attgcttgag ccaggagtt 2200  
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 gagacctact gggctgcatt ctgagacagt ggaggcattc taagtcacag 2400  
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 aaaacagatt gcagtaaaga agccaaccaa atcccaccaa aaccaagttg 2500  
 gccacgagag tgacctctgg tcgtcctcac tgctacactc ctgacagcac 2550  
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 cccaaaaggg ggaggaatga ataatccacc ccttgtttag caaataagca 2650  
 agaaataacc ataaaagtgg gcaaccagca gctctaggcg ctgctcttgt 2700  
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tcaccttaaa aaaa 2764

<210> 259

<211> 544

<212> PRT

<213> Homo sapiens

<400> 259

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Ala	Met	Asp	Gly	Arg	Phe	Trp	Ile	Arg	Val	Gln	Glu	Ser	Val	Met	
				20					25					30	
Val	Pro	Glu	Gly	Leu	Cys	Ile	Ser	Val	Pro	Cys	Ser	Phe	Ser	Tyr	
				35					40					45	
Pro	Arg	Gln	Asp	Trp	Thr	Gly	Ser	Thr	Pro	Ala	Tyr	Gly	Tyr	Trp	
				50					55					60	
Phe	Lys	Ala	Val	Thr	Glu	Thr	Thr	Lys	Gly	Ala	Pro	Val	Ala	Thr	
				65					70					75	
Asn	His	Gln	Ser	Arg	Glu	Val	Glu	Met	Ser	Thr	Arg	Gly	Arg	Phe	
				80					85					90	
Gln	Leu	Thr	Gly	Asp	Pro	Ala	Lys	Gly	Asn	Cys	Ser	Leu	Val	Ile	
				95					100					105	
Arg	Asp	Ala	Gln	Met	Gln	Asp	Glu	Ser	Gln	Tyr	Phe	Phe	Arg	Val	
				110					115					120	
Glu	Arg	Gly	Ser	Tyr	Val	Thr	Tyr	Asn	Phe	Met	Asn	Asp	Gly	Phe	
				125					130					135	
Phe	Leu	Lys	Val	Thr	Val	Leu	Ser	Phe	Thr	Pro	Arg	Pro	Gln	Asp	
				140					145					150	
His	Asn	Thr	Asp	Leu	Thr	Cys	His	Val	Asp	Phe	Ser	Arg	Lys	Gly	
				155					160					165	
Val	Ser	Ala	Gln	Arg	Thr	Val	Arg	Leu	Arg	Val	Ala	Tyr	Ala	Pro	
				170					175					180	
Arg	Asp	Leu	Val	Ile	Ser	Ile	Ser	Arg	Asp	Asn	Thr	Pro	Ala	Leu	
				185					190					195	
Glu	Pro	Gln	Pro	Gln	Gly	Asn	Val	Pro	Tyr	Leu	Glu	Ala	Gln	Lys	
				200					205					210	
Gly	Gln	Phe	Leu	Arg	Leu	Leu	Cys	Ala	Ala	Asp	Ser	Gln	Pro	Pro	
				215					220					225	
Ala	Thr	Leu	Ser	Trp	Val	Leu	Gln	Asn	Arg	Val	Leu	Ser	Ser	Ser	
				230					235					240	
His	Pro	Trp	Gly	Pro	Arg	Pro	Leu	Gly	Leu	Glu	Leu	Pro	Gly	Val	
				245					250					255	

Lys	Ala	Gly	Asp	Ser	Gly	Arg	Tyr	Thr	Cys	Arg	Ala	Glu	Asn	Arg	
				260					265					270	
Leu	Gly	Ser	Gln	Gln	Arg	Ala	Leu	Asp	Leu	Ser	Val	Gln	Tyr	Pro	
				275					280					285	
Pro	Glu	Asn	Leu	Arg	Val	Met	Val	Ser	Gln	Ala	Asn	Arg	Thr	Val	
				290					295					300	
Leu	Glu	Asn	Leu	Gly	Asn	Gly	Thr	Ser	Leu	Pro	Val	Leu	Glu	Gly	
				305					310					315	
Gln	Ser	Leu	Cys	Leu	Val	Cys	Val	Thr	His	Ser	Ser	Pro	Pro	Ala	
				320					325					330	
Arg	Leu	Ser	Trp	Thr	Gln	Arg	Gly	Gln	Val	Leu	Ser	Pro	Ser	Gln	
				335					340					345	
Pro	Ser	Asp	Pro	Gly	Val	Leu	Glu	Leu	Pro	Arg	Val	Gln	Val	Glu	
				350					355					360	
His	Glu	Gly	Glu	Phe	Thr	Cys	His	Ala	Arg	His	Pro	Leu	Gly	Ser	
				365					370					375	
Gln	His	Val	Ser	Leu	Ser	Leu	Ser	Val	His	Tyr	Lys	Lys	Gly	Leu	
				380					385					390	
Ile	Ser	Thr	Ala	Phe	Ser	Asn	Gly	Ala	Phe	Leu	Gly	Ile	Gly	Ile	
				395					400					405	
Thr	Ala	Leu	Leu	Phe	Leu	Cys	Leu	Ala	Leu	Ile	Ile	Met	Lys	Ile	
				410					415					420	
Leu	Pro	Lys	Arg	Arg	Thr	Gln	Thr	Glu	Thr	Pro	Arg	Pro	Arg	Phe	
				425					430					435	
Ser	Arg	His	Ser	Thr	Ile	Leu	Asp	Tyr	Ile	Asn	Val	Val	Pro	Thr	
				440					445					450	
Ala	Gly	Pro	Leu	Ala	Gln	Lys	Arg	Asn	Gln	Lys	Ala	Thr	Pro	Asn	
				455					460					465	
Ser	Pro	Arg	Thr	Pro	Pro	Pro	Pro	Gly	Ala	Pro	Ser	Pro	Glu	Ser	
				470					475					480	
Lys	Lys	Asn	Gln	Lys	Lys	Gln	Tyr	Gln	Leu	Pro	Ser	Phe	Pro	Glu	
				485					490					495	
Pro	Lys	Ser	Ser	Thr	Gln	Ala	Pro	Glu	Ser	Gln	Glu	Ser	Gln	Glu	
				500					505					510	
Glu	Leu	His	Tyr	Ala	Thr	Leu	Asn	Phe	Pro	Gly	Val	Arg	Pro	Arg	
				515					520					525	
Pro	Glu	Ala	Arg	Met	Pro	Lys	Gly	Thr	Gln	Ala	Asp	Tyr	Ala	Glu	
				530					535					540	
Val	Lys	Phe	Gln												

<210> 260  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 260  
caaagcctgc gcctggtctg tg 22

<210> 261  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 261  
ttctggagcc cagaggggtgc tgag 24

<210> 262  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 262  
ggagctgccca cccattcaaa tggagcacga aggagagttc acctg 45

<210> 263  
<211> 2857  
<212> DNA  
<213> Homo sapiens

<400> 263  
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actgctgcgt tttatgttgg gaattcctct cctatggcct tgtcttggag 100  
caacagaaaa ctctcaaaaca aagaaagtca agcagccagt gcgatctcat 150  
ttgagagtga agcgtggctg ggtgtggaac caattttttg taccagagga 200  
aatgaatacg actagtcac acatcggcca gctaagatct gatttagaca 250  
atggaaacaa ttctttccag tacaagcttt tgggagctgg agctggaagt 300  
acttttatca ttgatgaaag aacaggtgac atatatgcca tacagaagct 350  
tgatagagag gagcgatccc tctacatctt aagagcccag gtaatagaca 400  
tcgctactgg aagggctgtg gaacctgagt ctgagtttgt catcaaagtt 450

	365		370		375
Ala Ala Gly Thr	Ser Leu Asp Arg Leu	Val Thr Asp Ile Lys	Glu		
	380		385		390
Lys Leu Lys Leu	Ser Lys Lys Val Trp	Ser Ala Leu Pro Tyr	Thr		
	395		400		405
Ile Cys Lys Asp	Glu Ser Val Thr Ala	Gly Thr Ser Asn Glu	Glu		
	410		415		420
Glu Cys Trp Asn	Gly His Ser Lys Ala	Arg Tyr Leu Pro Glu	Ile		
	425		430		435
Met Asn Asp Gly	Leu Thr Asn Gln Ile	Asn Asn Pro Glu Val	Asp		
	440		445		450
Val Asp Ile Thr	Arg Pro Asp Thr Phe	Ile Arg Gln Gln Ile	Met		
	455		460		465
Ala Leu Arg Val	Met Thr Asn Lys Leu	Lys Asn Ala Tyr Asn	Gly		
	470		475		480
Asn Asp Val Asn	Phe Gln Asp Thr Ser	Asp Glu Ser Ser Gly	Ser		
	485		490		495
Gly Ser Gly Ser	Gly Cys Met Asp Asp	Val Cys Pro Thr Glu	Phe		
	500		505		510
Glu Phe Val Thr	Thr Glu Ala Pro Ala	Val Asp Pro Asp Arg	Arg		
	515		520		525
Glu Val Asp Ser	Ser Ala Ala Gln Arg	Gly His Ser Leu Leu	Ser		
	530		535		540
Trp Ser Leu Thr	Cys Ile Val Leu Ala	Leu Gln Arg Leu Cys	Arg		
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<210> 110

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 110

aagcgtgaca gcgggcacgt c 21

<210> 111

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 111

tgcacagtct ctgcagtgcc cagg 24

<210> 112

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 112

gaatgctgga acgggcacag caaagccaga tacttgctg 40

<210> 113

<211> 4649

<212> DNA

<213> Homo sapiens

<400> 113

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aataagttag ctgagaaaac gcacgcagtt tgcagcgcct gcgccgggtg 100

cgccaactac gcaaagacca agcgggctcc gcgcggaccg gccgcggggc 150

tagggaccgc gctttggcct tcaggctccc tagcagcggg gaaaaggaat 200

tgctgcccgg agtttctgcg gaggtggagg gagatcagga aacggcttct 250

tcctcacttc gccgcctggt gagtgtcggg gagattggca aacgcctagg 300

aaaggactgg ggaaaatagc cctgggaaag tggagaaggt gatcaggagg 350

ccggtccact acggcagttt atctgtctga tcagagccag acgcgacgcg 400

tccacttcgc agttctttcc aggtgtgggg accgcaggac agacggccga 450

tcccgcgcc ctccgtacca gcactcccag gagagtcagc ctgcgtcccc 500

aacgtcgagg gcgtctggc cacgaaaagt tcctgtccac tgtgattctc 550

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acttttttct tttttttttt ccttggtgga agctgctcta gggagggggg 650

aggaggagga gaaagtgaat tgtgctggag aagagcgagc cctccttgtt 700

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cctcctcact tatggttacc tgtcctgggg ccaggcctta gaagaggagg 1050  
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acaagctcgc tgccgaagga gttaaactgg agaactacta tgtccagcct 1250  
atgtgcacac catccaggag tcagtttatt actggaaagt atcagataca 1300  
caccggactt caacattcta tcataagacc taccacaacc aactgtttac 1350  
ctctggacaa tgccacccta cctcagaaac tgaaggaggt tggatattca 1400  
acgcatatgg tcggaaaatg gcacttgggt tttaacagaa aagaatgcat 1450  
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gggattacta tacacactac aaatgtgaca gtcctgggat gtgtggctat 1550  
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ctccacacag atgtacactc agagagtaca gcaaactcta gcttcccata 1650  
accccaaaaa gcctatatatt ttatatactg cctatcaagc tgttcattca 1700  
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tcaacaacgt gacattggct ctaaagactt atggtttcta taacaacagc 1850  
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<211> 515

<212> PRT

<213> Homo sapiens

<400> 114

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				20					25					30
Ala	Gly	Phe	Trp	Ile	Leu	Cys	Leu	Leu	Thr	Tyr	Gly	Tyr	Leu	Ser
				35					40					45
Trp	Gly	Gln	Ala	Leu	Glu	Glu	Glu	Glu	Glu	Gly	Ala	Leu	Leu	Ala
				50					55					60
Gln	Ala	Gly	Glu	Lys	Leu	Glu	Pro	Ser	Thr	Thr	Ser	Thr	Ser	Gln
				65					70					75
Pro	His	Leu	Ile	Phe	Ile	Leu	Ala	Asp	Asp	Gln	Gly	Phe	Arg	Asp
				80					85					90
Val	Gly	Tyr	His	Gly	Ser	Glu	Ile	Lys	Thr	Pro	Thr	Leu	Asp	Lys
				95					100					105
Leu	Ala	Ala	Glu	Gly	Val	Lys	Leu	Glu	Asn	Tyr	Tyr	Val	Gln	Pro

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Asn Cys Leu Pro Leu Asp Asn Ala Thr	Leu Pro Gln Lys Leu Lys	
155	160	165
Glu Val Gly Tyr Ser Thr His Met Val	Gly Lys Trp His Leu Gly	
170	175	180
Phe Asn Arg Lys Glu Cys Met Pro Thr	Arg Arg Gly Phe Asp Thr	
185	190	195
Phe Phe Gly Ser Leu Leu Gly Ser Gly	Asp Tyr Tyr Thr His Tyr	
200	205	210
Lys Cys Asp Ser Pro Gly Met Cys Gly	Tyr Asp Leu Tyr Glu Asn	
215	220	225
Asp Asn Ala Ala Trp Asp Tyr Asp Asn	Gly Ile Tyr Ser Thr Gln	
230	235	240
Met Tyr Thr Gln Arg Val Gln Gln Ile	Leu Ala Ser His Asn Pro	
245	250	255
Thr Lys Pro Ile Phe Leu Tyr Thr Ala	Tyr Gln Ala Val His Ser	
260	265	270
Pro Leu Gln Ala Pro Gly Arg Tyr Phe	Glu His Tyr Arg Ser Ile	
275	280	285
Ile Asn Ile Asn Arg Arg Arg Tyr Ala	Ala Met Leu Ser Cys Leu	
290	295	300
Asp Glu Ala Ile Asn Asn Val Thr Leu	Ala Leu Lys Thr Tyr Gly	
305	310	315
Phe Tyr Asn Asn Ser Ile Ile Ile Tyr	Ser Ser Asp Asn Gly Gly	
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Gln Pro Thr Ala Gly Gly Ser Asn Trp	Pro Leu Arg Gly Ser Lys	
335	340	345
Gly Thr Tyr Trp Glu Gly Gly Ile Arg	Ala Val Gly Phe Val His	
350	355	360
Ser Pro Leu Leu Lys Asn Lys Gly Thr	Val Cys Lys Glu Leu Val	
365	370	375
His Ile Thr Asp Trp Tyr Pro Thr Leu	Ile Ser Leu Ala Glu Gly	
380	385	390
Gln Ile Asp Glu Asp Ile Gln Leu Asp	Gly Tyr Asp Ile Trp Glu	
395	400	405

Thr	Ile	Ser	Glu	Gly	Leu	Arg	Ser	Pro	Arg	Val	Asp	Ile	Leu	His
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Asn	Ile	Asp	Pro	Tyr	Thr	Pro	Arg	Gln	Lys	Met	Ala	Pro	Gly	Gln
				425					430					435
Gln	Ala	Met	Gly	Ser	Gly	Thr	Leu	Gln	Ser	Ser	Gln	Pro	Ser	Glu
				440					445					450
Cys	Ser	Thr	Gly	Asn	Cys	Leu	Gln	Glu	Ile	Leu	Ala	Thr	Ala	Thr
				455					460					465
Gly	Ser	Pro	Leu	Ser	Leu	Ser	Ala	Thr	Trp	Asp	Arg	Thr	Gly	Gly
				470					475					480
Thr	Met	Asn	Gly	Ser	Pro	Cys	Gln	Leu	Ala	Lys	Val	Tyr	Gly	Phe
				485					490					495
Ser	Thr	Ser	Gln	Pro	Thr	His	Met	Arg	Gly	Trp	Thr	Tyr	Leu	Thr
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Gly	Ile	Gln	Glu	Ser										
				515										

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 ctctctgagt gtacatctgt gtgg 24  
  
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 <221> unsure  
 <222> 33  
 <223> unknown base

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cgg 53

<210> 118  
<211> 2260  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 2009, 2026, 2033, 2055, 2074, 2078, 2086  
<223> unknown base

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gccttgcgct cccgctgctg ctctcctggg tggcaggtgg ttccggaac 200  
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<211> 338  
<212> PRT  
<213> Homo sapiens

<400> 119  
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Leu	Leu	Ala	Ser	Ala	Arg	Gln	Pro	Gly	Val	Cys	His	Tyr	Gly	Thr	35	40	45
Lys	Leu	Ala	Cys	Cys	Tyr	Gly	Trp	Arg	Arg	Asn	Ser	Lys	Gly	Val	50	55	60
Cys	Glu	Ala	Thr	Cys	Glu	Pro	Gly	Cys	Lys	Phe	Gly	Glu	Cys	Val	65	70	75
Gly	Pro	Asn	Lys	Cys	Arg	Cys	Phe	Pro	Gly	Tyr	Thr	Gly	Lys	Thr	80	85	90
Cys	Ser	Gln	Asp	Val	Asn	Glu	Cys	Gly	Met	Lys	Pro	Arg	Pro	Cys	95	100	105
Gln	His	Arg	Cys	Val	Asn	Thr	His	Gly	Ser	Tyr	Lys	Cys	Phe	Cys	110	115	120
Leu	Ser	Gly	His	Met	Leu	Met	Pro	Asp	Ala	Thr	Cys	Val	Asn	Ser	125	130	135
Arg	Thr	Cys	Ala	Met	Ile	Asn	Cys	Gln	Tyr	Ser	Cys	Glu	Asp	Thr	140	145	150
Glu	Glu	Gly	Pro	Gln	Cys	Leu	Cys	Pro	Ser	Ser	Gly	Leu	Arg	Leu	155	160	165
Ala	Pro	Asn	Gly	Arg	Asp	Cys	Leu	Asp	Ile	Asp	Glu	Cys	Ala	Ser	170	175	180
Gly	Lys	Val	Ile	Cys	Pro	Tyr	Asn	Arg	Arg	Cys	Val	Asn	Thr	Phe	185	190	195
Gly	Ser	Tyr	Tyr	Cys	Lys	Cys	His	Ile	Gly	Phe	Glu	Leu	Gln	Tyr	200	205	210
Ile	Ser	Gly	Arg	Tyr	Asp	Cys	Ile	Asp	Ile	Asn	Glu	Cys	Thr	Met	215	220	225
Asp	Ser	His	Thr	Cys	Ser	His	His	Ala	Asn	Cys	Phe	Asn	Thr	Gln	230	235	240
Gly	Ser	Phe	Lys	Cys	Lys	Cys	Lys	Gln	Gly	Tyr	Lys	Gly	Asn	Gly	245	250	255
Leu	Arg	Cys	Ser	Ala	Ile	Pro	Glu	Asn	Ser	Val	Lys	Glu	Val	Leu	260	265	270
Arg	Ala	Pro	Gly	Thr	Ile	Lys	Asp	Arg	Ile	Lys	Lys	Leu	Leu	Ala	275	280	285
His	Lys	Asn	Ser	Met	Lys	Lys	Lys	Ala	Lys	Ile	Lys	Asn	Val	Thr	290	295	300
Pro	Glu	Pro	Thr	Arg	Thr	Pro	Thr	Pro	Lys	Val	Asn	Leu	Gln	Pro			

305

310

315

Phe Asn Tyr Glu Glu Ile Val Ser Arg Gly Gly Asn Ser His Gly  
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Gly Lys Lys Gly Asn Glu Glu Lys  
 335

&lt;210&gt; 120

&lt;211&gt; 22

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic oligonucleotide probe

&lt;400&gt; 120

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&lt;210&gt; 121

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic oligonucleotide probe

&lt;400&gt; 121

ggctgcacgt atggctatcc atag 24

&lt;210&gt; 122

&lt;211&gt; 50

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic oligonucleotide probe

&lt;400&gt; 122

gataaactgt cagtacagct gtgaagacac agaagaaggg ccacagtgcc 50

&lt;210&gt; 123

&lt;211&gt; 1199

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 123

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<210> 124

<211> 289

<212> PRT

<213> Homo sapiens

<400> 124

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			20						25				30	

Ala	Arg	Arg	Val	His	Glu	Leu	Glu	Arg	Val	Lys	Arg	Arg	Cys	Leu
			35						40				45	

Glu	Asn	Gly	Asn	Leu	Lys	Glu	Lys	Asp	Ile	Leu	Val	Leu	Pro	Leu
			50						55				60	

Asp	Leu	Thr	Asp	Thr	Gly	Ser	His	Glu	Ala	Ala	Thr	Lys	Ala	Val
			65						70				75	

Leu	Gln	Glu	Phe	Gly	Arg	Ile	Asp	Ile	Leu	Val	Asn	Asn	Gly	Gly
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	80	85	90
Met Ser Gln Arg Ser Leu Cys Met Asp Thr Ser Leu Asp Val Tyr	95	100	105
Arg Lys Leu Ile Glu Leu Asn Tyr Leu Gly Thr Val Ser Leu Thr	110	115	120
Lys Cys Val Leu Pro His Met Ile Glu Arg Lys Gln Gly Lys Ile	125	130	135
Val Thr Val Asn Ser Ile Leu Gly Ile Ile Ser Val Pro Leu Ser	140	145	150
Ile Gly Tyr Cys Ala Ser Lys His Ala Leu Arg Gly Phe Phe Asn	155	160	165
Gly Leu Arg Thr Glu Leu Ala Thr Tyr Pro Gly Ile Ile Val Ser	170	175	180
Asn Ile Cys Pro Gly Pro Val Gln Ser Asn Ile Val Glu Asn Ser	185	190	195
Leu Ala Gly Glu Val Thr Lys Thr Ile Gly Asn Asn Gly Asp Gln	200	205	210
Ser His Lys Met Thr Thr Ser Arg Cys Val Arg Leu Met Leu Ile	215	220	225
Ser Met Ala Asn Asp Leu Lys Glu Val Trp Ile Ser Glu Gln Pro	230	235	240
Phe Leu Leu Val Thr Tyr Leu Trp Gln Tyr Met Pro Thr Trp Ala	245	250	255
Trp Trp Ile Thr Asn Lys Met Gly Lys Lys Arg Ile Glu Asn Phe	260	265	270
Lys Ser Gly Val Asp Ala Asp Ser Ser Tyr Phe Lys Ile Phe Lys	275	280	285
Thr Lys His Asp			

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 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

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<210> 126  
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<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 126

ctgtgaatag catcctggg 19

<210> 127

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<212> DNA

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<210> 128

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 128

ctgtagacat ccaagctggt atcc 24

<210> 129

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 129

aagagtctgc atccacacca ctc 23

<210> 130

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 130

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<210> 131

<211> 2365

<212> DNA

<213> Homo sapiens

<400> 131



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<210> 132

<211> 571

<212> PRT

<213> Homo sapiens

<400> 132

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Ile	Thr	Thr	Tyr	Ala	Ile	Asn	Val	Ser	Leu	Met	Trp	Leu	Ser	Phe
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Arg	Lys	Val	Gln	Glu	Pro	Gln	Gly	Lys	Ala	Lys	Arg	His	Gly	Asn
			50						55					60

Thr	Val	Pro	Gly	Glu	Trp	Pro	Trp	Gln	Ala	Ser	Val	Arg	Arg	Gln
			65						70					75

Gly	Ala	His	Ile	Cys	Ser	Gly	Ser	Leu	Val	Ala	Asp	Thr	Trp	Val	
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Leu	Thr	Ala	Ala	His	Cys	Phe	Glu	Lys	Ala	Ala	Ala	Thr	Glu	Leu	
				95					100					105	
Asn	Ser	Trp	Ser	Val	Val	Leu	Gly	Ser	Leu	Gln	Arg	Glu	Gly	Leu	
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Ser	Pro	Gly	Ala	Glu	Glu	Val	Gly	Val	Ala	Ala	Leu	Gln	Leu	Pro	
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Arg	Ala	Tyr	Asn	His	Tyr	Ser	Gln	Gly	Ser	Asp	Leu	Ala	Leu	Leu	
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Gln	Leu	Ala	His	Pro	Thr	Thr	His	Thr	Pro	Leu	Cys	Leu	Pro	Gln	
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Pro	Ala	His	Arg	Phe	Pro	Phe	Gly	Ala	Ser	Cys	Trp	Ala	Thr	Gly	
				170					175					180	
Trp	Asp	Gln	Asp	Thr	Ser	Asp	Ala	Pro	Gly	Thr	Leu	Arg	Asn	Leu	
				185					190					195	
Arg	Leu	Arg	Leu	Ile	Ser	Arg	Pro	Thr	Cys	Asn	Cys	Ile	Tyr	Asn	
				200					205					210	
Gln	Leu	His	Gln	Arg	His	Leu	Ser	Asn	Pro	Ala	Arg	Pro	Gly	Met	
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Leu	Cys	Gly	Gly	Pro	Gln	Pro	Gly	Val	Gln	Gly	Pro	Cys	Gln	Gly	
				230					235					240	
Asp	Ser	Gly	Gly	Pro	Val	Leu	Cys	Leu	Glu	Pro	Asp	Gly	His	Trp	
				245					250					255	
Val	Gln	Ala	Gly	Ile	Ile	Ser	Phe	Ala	Ser	Ser	Cys	Ala	Gln	Glu	
				260					265					270	
Asp	Ala	Pro	Val	Leu	Leu	Thr	Asn	Thr	Ala	Ala	His	Ser	Ser	Trp	
				275					280					285	
Leu	Gln	Ala	Arg	Val	Gln	Gly	Ala	Ala	Phe	Leu	Ala	Gln	Ser	Pro	
				290					295					300	
Glu	Thr	Pro	Glu	Met	Ser	Asp	Glu	Asp	Ser	Cys	Val	Ala	Cys	Gly	
				305					310					315	
Ser	Leu	Arg	Thr	Ala	Gly	Pro	Gln	Ala	Gly	Ala	Pro	Ser	Pro	Trp	
				320					325					330	
Pro	Trp	Glu	Ala	Arg	Leu	Met	His	Gln	Gly	Gln	Leu	Ala	Cys	Gly	
				335					340					345	
Gly	Ala	Leu	Val	Ser	Glu	Glu	Ala	Val	Leu	Thr	Ala	Ala	His	Cys	
				350					355					360	
Phe	Ile	Gly	Arg	Gln	Ala	Pro	Glu	Glu	Trp	Ser	Val	Gly	Leu	Gly	

	365		370		375
Thr Arg Pro Glu	Glu Trp Gly Leu Lys	Gln Leu Ile Leu His	Gly		
	380	385	390		
Ala Tyr Thr His	Pro Glu Gly Gly Tyr	Asp Met Ala Leu Leu	Leu		
	395	400	405		
Leu Ala Gln Pro	Val Thr Leu Gly Ala	Ser Leu Arg Pro Leu	Cys		
	410	415	420		
Leu Pro Tyr Pro	Asp His His Leu Pro	Asp Gly Glu Arg Gly	Trp		
	425	430	435		
Val Leu Gly Arg	Ala Arg Pro Gly Ala	Gly Ile Ser Ser Leu	Gln		
	440	445	450		
Thr Val Pro Val	Thr Leu Leu Gly Pro	Arg Ala Cys Ser Arg	Leu		
	455	460	465		
His Ala Ala Pro	Gly Gly Asp Gly Ser	Pro Ile Leu Pro Gly	Met		
	470	475	480		
Val Cys Thr Ser	Ala Val Gly Glu Leu	Pro Ser Cys Glu Gly	Leu		
	485	490	495		
Ser Gly Ala Pro	Leu Val His Glu Val	Arg Gly Thr Trp Phe	Leu		
	500	505	510		
Ala Gly Leu His	Ser Phe Gly Asp Ala	Cys Gln Gly Pro Ala	Arg		
	515	520	525		
Pro Ala Val Phe	Thr Ala Leu Pro Ala	Tyr Glu Asp Trp Val	Ser		
	530	535	540		
Ser Leu Asp Trp	Gln Val Tyr Phe Ala	Glu Glu Pro Glu Pro	Glu		
	545	550	555		
Ala Glu Pro Gly	Ser Cys Leu Ala Asn	Ile Ser Gln Pro Thr	Ser		
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Cys

<210> 133  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 133  
 cctgtgctgt gcctcgagcc tgac 24

<210> 134  
 <211> 24  
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 134

gtgggcagca gttagcaccg cctc 24

<210> 135

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 135

ggctggcatc atcagctttg catcaagctg tgcccaggag gacgc 45

<210> 136

<211> 1998

<212> DNA

<213> Homo sapiens

<400> 136

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ggggcagcct tccaccacgg ggagcccagc tgtcagccgc ctcacaggaa 150  
gatgctgctg cggcggggca gccctggcat ggggtgtcat gtgggtgcag 200  
ccctgggagc actgtggttc tgcctcacag gagccctgga ggtccaggtc 250  
cctgaagacc cagtgggtggc actgggtgggc accgatgcca ccctgtgctg 300  
ctcctttctc cctgagcctg gcttcagcct ggcacagctc aacctcatct 350  
ggcagctgac agataccaaa cagctgggtgc acagctttgc tgagggccag 400  
gaccagggca gcgcctatgc caaccgcacg gccctcttcc cggacctgct 450  
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cttgtttgat gtgcacacgg tcctgcgggt ggtgctgggt gcgaatggca 800  
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 attttgggga aaataaatgt ctttgtaaaa aaaaaaaaaa aaaaaaaaa 1998

<210> 137

<211> 316

<212> PRT

<213> Homo sapiens

<220>

<221> unsure

<222> 233

<223> unknown amino acid

<400> 137

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Val Gln Val Pro	Glu Asp Pro Val Val	Ala Leu Val Gly Thr	Asp
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Ala Thr Leu Cys	Cys Ser Phe Ser Pro	Glu Pro Gly Phe Ser	Leu
	50	55	60
Ala Gln Leu Asn	Leu Ile Trp Gln Leu	Thr Asp Thr Lys Gln	Leu
	65	70	75
Val His Ser Phe	Ala Glu Gly Gln Asp	Gln Gly Ser Ala Tyr	Ala
	80	85	90
Asn Arg Thr Ala	Leu Phe Pro Asp Leu	Leu Ala Gln Gly Asn	Ala
	95	100	105
Ser Leu Arg Leu	Gln Arg Val Arg Val	Ala Asp Glu Gly Ser	Phe
	110	115	120
Thr Cys Phe Val	Ser Ile Arg Asp Phe	Gly Ser Ala Ala Val	Ser
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Leu Gln Val Ala	Ala Pro Tyr Ser Lys	Pro Ser Met Thr Leu	Glu
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Pro Asn Lys Asp	Leu Arg Pro Gly Asp	Thr Val Thr Ile Thr	Cys
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Ser Ser Tyr Gln	Gly Tyr Pro Glu Ala	Glu Val Phe Trp Gln	Asp
	170	175	180
Gly Gln Gly Val	Pro Leu Thr Gly Asn	Val Thr Thr Ser Gln	Met
	185	190	195
Ala Asn Glu Gln	Gly Leu Phe Asp Val	His Ser Val Leu Arg	Val
	200	205	210
Val Leu Gly Ala	Asn Gly Thr Tyr Ser	Cys Leu Val Arg Asn	Pro
	215	220	225
Val Leu Gln Gln	Asp Ala His Xaa Ser	Val Thr Ile Thr Gly	Gln
	230	235	240
Pro Met Thr Phe	Pro Pro Glu Ala Leu	Trp Val Thr Val Gly	Leu
	245	250	255
Ser Val Cys Leu	Ile Ala Leu Leu Val	Ala Leu Ala Phe Val	Cys
	260	265	270
Trp Arg Lys Ile	Lys Gln Ser Cys Glu	Glu Glu Asn Ala Gly	Ala
	275	280	285
Glu Asp Gln Asp	Gly Glu Gly Glu Gly	Ser Lys Thr Ala Leu	Gln
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Pro Leu Lys His Ser Asp Ser Lys Glu Asp Asp Gly Gln Glu Ile  
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Ala

<210> 138  
 <211> 24  
 <212> DNA  
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<400> 138  
 ctggcacagc tcaacctcat ctgg 24

<210> 139  
 <211> 20  
 <212> DNA  
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<220>  
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<400> 139  
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<210> 140  
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<400> 140  
 ggacacagta tactgaccac 20

<210> 141  
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<400> 141  
 tgcgaaccag gcagctgtaa gtgc 24

<210> 142  
 <211> 24  
 <212> DNA  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 142  
tggaagaaga ggggtggtgat gtgg 24

<210> 143  
<211> 45  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 143  
cagctgacag acaccaaaca gctggtgcac agtttcaccg aaggc 45

<210> 144  
<211> 2336  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 1620, 1673  
<223> unknown base

<400> 144  
ttcgtgaccc ttgagaaaag agttggtggt aaatgtgccca cgtcttctaa 50  
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tacgttctta aatctatgaa gtcgaggag ctttcgctgc tttttagagg 150  
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gttaaagcat atttaaagaa ggagtttgaa aaacatgggtg cgggtggtgaa 700  
tgaaagtcac catgatgctt tgggtggagga tattttttgat aaagaagatg 750  
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gagttataga gatacatcta cccttttaat atagcactca tctttcaaga 850

gagggcagtc atcttttaaag aacattttat ttttatacaa tggtctttct 900  
tgctttgttt tttattttta tatatttttt ctgactccta tttaaagaac 950  
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<210> 145

<211> 211

<212> PRT

<213> Homo sapiens

<400> 145

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Val Leu Gln Lys Pro Phe Ile Cys His Arg Lys Thr Lys Gly Gly  
35 40 45

Asp Leu Met Leu Val His Tyr Glu Gly Tyr Leu Glu Lys Asp Gly  
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Ser Leu Phe His Ser Thr His Lys His Asn Asn Gly Gln Pro Ile  
65 70 75

Trp Phe Thr Leu Gly Ile Leu Glu Ala Leu Lys Gly Trp Asp Gln  
80 85 90

Gly Leu Lys Gly Met Cys Val Gly Glu Lys Arg Lys Leu Ile Ile  
95 100 105

Pro Pro Ala Leu Gly Tyr Gly Lys Glu Gly Lys Gly Lys Ile Pro  
110 115 120

Pro Glu Ser Thr Leu Ile Phe Asn Ile Asp Leu Leu Glu Ile Arg  
125 130 135

Asn Gly Pro Arg Ser His Glu Ser Phe Gln Glu Met Asp Leu Asn  
140 145 150

Asp Asp Trp Lys Leu Ser Lys Asp Glu Val Lys Ala Tyr Leu Lys  
155 160 165

Lys Glu Phe Glu Lys His Gly Ala Val Val Asn Glu Ser His His  
170 175 180

Asp Ala Leu Val Glu Asp Ile Phe Asp Lys Glu Asp Glu Asp Lys  
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Asp Gly Phe Ile Ser Ala Arg Glu Phe Thr Tyr Lys His Asp Glu  
200 205 210

Leu

<210> 146

<211> 26

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 146  
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<210> 147  
<211> 25  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 147  
gccagagca ggaggaatga tgagc 25

<210> 148  
<211> 49  
<212> DNA  
<213> Artificial Sequence

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<400> 148  
gtggaacgcg gtcttgactc tggtcgtcac ttctttgatt ggggctttg 49

<210> 149  
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<212> DNA  
<213> Homo sapiens

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aagatcatta acctgaagct ggagcgggtt caagaccgcg tggagttctc 450  
aggaacccc agcaagtacg atgtgtcggg gatgctgaga aacgtgcagc 500  
cggaggatga ggggatttac aactgctaca tcatgaacct ccctgaccgc 550  
cacggtggcc atggcaagat ccatctgcag gtcctcatgg aagagcccc 600

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cgtgtgcctg taatcccagc tatttgggag gctgaggcag gagaatcgct 2100  
 tgagcccgga aagcagaggt tgcagtgaac tgagatagtg atagtgccac 2150  
 tgcaattcag cctgggtgac atagagagac tccatctcaa aaaaaa 2196

<210> 150  
 <211> 215  
 <212> PRT  
 <213> Homo sapiens

<400> 150  
 Met His Arg Asp Ala Trp Leu Pro Arg Pro Ala Phe Ser Leu Thr  
 1 5 10 15  
 Gly Leu Ser Leu Phe Phe Ser Leu Val Pro Pro Gly Arg Ser Met  
 20 25 30  
 Glu Val Thr Val Pro Ala Thr Leu Asn Val Leu Asn Gly Ser Asp  
 35 40 45  
 Ala Arg Leu Pro Cys Thr Phe Asn Ser Cys Tyr Thr Val Asn His  
 50 55 60  
 Lys Gln Phe Ser Leu Asn Trp Thr Tyr Gln Glu Cys Asn Asn Cys  
 65 70 75  
 Ser Glu Glu Met Phe Leu Gln Phe Arg Met Lys Ile Ile Asn Leu  
 80 85 90  
 Lys Leu Glu Arg Phe Gln Asp Arg Val Glu Phe Ser Gly Asn Pro  
 95 100 105  
 Ser Lys Tyr Asp Val Ser Val Met Leu Arg Asn Val Gln Pro Glu  
 110 115 120  
 Asp Glu Gly Ile Tyr Asn Cys Tyr Ile Met Asn Pro Pro Asp Arg  
 125 130 135  
 His Arg Gly His Gly Lys Ile His Leu Gln Val Leu Met Glu Glu  
 140 145 150  
 Pro Pro Glu Arg Asp Ser Thr Val Ala Val Ile Val Gly Ala Ser  
 155 160 165  
 Val Gly Gly Phe Leu Ala Val Val Ile Leu Val Leu Met Val Val  
 170 175 180  
 Lys Cys Val Arg Arg Lys Lys Glu Gln Lys Leu Ser Thr Asp Asp  
 185 190 195  
 Leu Lys Thr Glu Glu Glu Gly Lys Thr Asp Gly Glu Gly Asn Pro  
 200 205 210  
 Asp Asp Gly Ala Lys  
 215

<210> 151

<211> 524  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 103, 233  
<223> unknown base

<400> 151  
gttgatatg tcctgaagta catccgtgca ttttttttag catccaacca 50  
tcctcccttg tagttctcgc cccctcaaat caccttctcc cttagcccac 100  
ccnactaaca tctcagtctc tgaaaaatgca cagagatgcc tggctacctc 150  
gccctgcctt cagcctcacg gggctcagtc tctttttctc tttggtgcca 200  
ccaggacgga gcatggaggt ccacagtacc tgnccaccct caacgtcctc 250  
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aaccacaaac agttctccct gaactggact taccaggagt gcaacaactg 350  
ctctgaggag atgttcctcc agttccgcat gaagatcatt aacctgaagc 400  
tggagcgggt tcaagaccgc gtggagttct cagggaaccc cagcaagtac 450  
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caactgctac atcatgaacc cccc 524

<210> 152  
<211> 368  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 56, 123  
<223> unknown base

<400> 152  
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gaggtncaca tacctgccac cctcaacgtc ctcaatggct ttgacgcccg 100  
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ccctgaactg gatttaccag gagtgcaca actggctctg aggagatggt 200  
cctccagttc ccgcatggaa gatcatttaa cctgaaagct ggaagcgggt 250  
ttcaagaacc gcgtggaagt ttctcagga accccagcaa gtacgatgtg 300  
tcggtgatgc tgagaaacgt gcagccggag gatgagggga tttacaactg 350  
ctacatcatg aaccccc 368

<210> 153  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 153  
acggagcatg gaggtccaca gtac 24

<210> 154  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 154  
gcacgtttct cagcatcacc gac 23

<210> 155  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 155  
cgctgcct gcaccttcaa ctctgctac acagtgaacc acaaacagtt 50

<210> 156  
<211> 2680  
<212> DNA  
<213> Homo sapiens

<400> 156  
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cgcggaacca gcgctcccg cggacgtca cccccagtg gtgctgggtcc 150  
ctggtgattt gggtaaccaa ctggaagcca agctggacaa gccgacagt 200  
gtgcactacc tctgctccaa gaagaccgaa agctacttca caatctggct 250  
gaacctggaa ctgctgctgc ctgtcatcat tgactgctgg attgacaata 300  
tcaggctggg ttacaacaaa acatccaggg ccaccagtt tcctgatggg 350  
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 cagccgcagg cctggaagga caagtatatc cgggccttcg tgtcactggg 700  
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<210> 157

<211> 412

<212> PRT

<213> Artificial

<400> 157

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Gly	Leu	Leu	Phe	Leu	Leu	Leu	Leu	Leu	Met	Leu	Leu	Ala	Asp	Pro
				20					25					30
Ala	Leu	Pro	Ala	Gly	Arg	His	Pro	Pro	Val	Val	Leu	Val	Pro	Gly
				35					40					45
Asp	Leu	Gly	Asn	Gln	Leu	Glu	Ala	Lys	Leu	Asp	Lys	Pro	Thr	Val
				50					55					60
Val	His	Tyr	Leu	Cys	Ser	Lys	Lys	Thr	Glu	Ser	Tyr	Phe	Thr	Ile
				65					70					75
Trp	Leu	Asn	Leu	Glu	Leu	Leu	Leu	Pro	Val	Ile	Ile	Asp	Cys	Trp
				80					85					90
Ile	Asp	Asn	Ile	Arg	Leu	Val	Tyr	Asn	Lys	Thr	Ser	Arg	Ala	Thr
				95					100					105
Gln	Phe	Pro	Asp	Gly	Val	Asp	Val	Arg	Val	Pro	Gly	Phe	Gly	Lys

110	115	120
Thr Phe Ser Leu Glu Phe Leu Asp Pro Ser Lys Ser Ser Val Gly		
125	130	135
Ser Tyr Phe His Thr Met Val Glu Ser Leu Val Gly Trp Gly Tyr		
140	145	150
Thr Arg Gly Glu Asp Val Arg Gly Ala Pro Tyr Asp Trp Arg Arg		
155	160	165
Ala Pro Asn Glu Asn Gly Pro Tyr Phe Leu Ala Leu Arg Glu Met		
170	175	180
Ile Glu Glu Met Tyr Gln Leu Tyr Gly Gly Pro Val Val Leu Val		
185	190	195
Ala His Ser Met Gly Asn Met Tyr Thr Leu Tyr Phe Leu Gln Arg		
200	205	210
Gln Pro Gln Ala Trp Lys Asp Lys Tyr Ile Arg Ala Phe Val Ser		
215	220	225
Leu Gly Ala Pro Trp Gly Gly Val Ala Lys Thr Leu Arg Val Leu		
230	235	240
Ala Ser Gly Asp Asn Asn Arg Ile Pro Val Ile Gly Pro Leu Lys		
245	250	255
Ile Arg Glu Gln Gln Arg Ser Ala Val Ser Thr Ser Trp Leu Leu		
260	265	270
Pro Tyr Asn Tyr Thr Trp Ser Pro Glu Lys Val Phe Val Gln Thr		
275	280	285
Pro Thr Ile Asn Tyr Thr Leu Arg Asp Tyr Arg Lys Phe Phe Gln		
290	295	300
Asp Ile Gly Phe Glu Asp Gly Trp Leu Met Arg Gln Asp Thr Glu		
305	310	315
Gly Leu Val Glu Ala Thr Met Pro Pro Gly Val Gln Leu His Cys		
320	325	330
Leu Tyr Gly Thr Gly Val Pro Thr Pro Asp Ser Phe Tyr Tyr Glu		
335	340	345
Ser Phe Pro Asp Arg Asp Pro Lys Ile Cys Phe Gly Asp Gly Asp		
350	355	360
Gly Thr Val Asn Leu Lys Ser Ala Leu Gln Cys Gln Ala Trp Gln		
365	370	375
Ser Arg Gln Glu His Gln Val Leu Leu Gln Glu Leu Pro Gly Ser		
380	385	390
Glu His Ile Glu Met Leu Ala Asn Ala Thr Thr Leu Ala Tyr Leu		
395	400	405

Lys Arg Val Leu Leu Gly Pro  
410

<210> 158

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 158

ctggggctac acacggggtg agg 23

<210> 159

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 159

ggtgccgctg cagaaagtag agcg 24

<210> 160

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 160

gccccaaatg aaaacgggcc ctacttcctg gccctccgcg agatg 45

<210> 161

<211> 1512

<212> DNA

<213> Homo sapiens

<400> 161

cggacgcgtg ggcggacgcg tggggcgggc gcagcggcgg cgacggcgac 50

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gcggcgcttc ctgacgcagc cgcagggtgtt ggcgcgcgcc gtgtgcttgg 150

tcttcgcctt gatcgtgttc tcttgcattc atggtgaggg ctacagcaat 200

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ctgccgctat ggcagtgcca tcgggggtgct ggccttcctg gcctcggcct 300

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cgcaagtacc tggtcattgg tgacctgctc ttctcagctc tctggacctt 400

cctgtggttt gttggtttct gcttcctcac caaccagtgg gcagtcacca 450  
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tctcattcaa ag 1512

<210> 162

<211> 224

<212> PRT

<213> Homo sapiens

<400> 162

Met	Glu	Ser	Gly	Ala	Tyr	Gly	Ala	Ala	Lys	Ala	Gly	Gly	Ser	Phe
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Asp	Leu	Arg	Arg	Phe	Leu	Thr	Gln	Pro	Gln	Val	Val	Ala	Arg	Ala
				20					25					30



Val	Cys	Leu	Val	Phe	Ala	Leu	Ile	Val	Phe	Ser	Cys	Ile	Tyr	Gly	35	40	45
Glu	Gly	Tyr	Ser	Asn	Ala	His	Glu	Ser	Lys	Gln	Met	Tyr	Cys	Val	50	55	60
Phe	Asn	Arg	Asn	Glu	Asp	Ala	Cys	Arg	Tyr	Gly	Ser	Ala	Ile	Gly	65	70	75
Val	Leu	Ala	Phe	Leu	Ala	Ser	Ala	Phe	Phe	Leu	Val	Val	Asp	Ala	80	85	90
Tyr	Phe	Pro	Gln	Ile	Ser	Asn	Ala	Thr	Asp	Arg	Lys	Tyr	Leu	Val	95	100	105
Ile	Gly	Asp	Leu	Leu	Phe	Ser	Ala	Leu	Trp	Thr	Phe	Leu	Trp	Phe	110	115	120
Val	Gly	Phe	Cys	Phe	Leu	Thr	Asn	Gln	Trp	Ala	Val	Thr	Asn	Pro	125	130	135
Lys	Asp	Val	Leu	Val	Gly	Ala	Asp	Ser	Val	Arg	Ala	Ala	Ile	Thr	140	145	150
Phe	Ser	Phe	Phe	Ser	Ile	Phe	Ser	Trp	Gly	Val	Leu	Ala	Ser	Leu	155	160	165
Ala	Tyr	Gln	Arg	Tyr	Lys	Ala	Gly	Val	Asp	Asp	Phe	Ile	Gln	Asn	170	175	180
Tyr	Val	Asp	Pro	Thr	Pro	Asp	Pro	Asn	Thr	Ala	Tyr	Ala	Ser	Tyr	185	190	195
Pro	Gly	Ala	Ser	Val	Asp	Asn	Tyr	Gln	Gln	Pro	Pro	Phe	Thr	Gln	200	205	210
Asn	Ala	Glu	Thr	Thr	Glu	Gly	Tyr	Gln	Pro	Pro	Pro	Val	Tyr		215	220	

<210> 163

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 163

tggtcttcgc cttgatcgtg ttct 24

<210> 164

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 164  
gtgtactgag cggcgggtag 20

<210> 165  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 165  
ctgaaggatga tggctgccct cac 23

<210> 166  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 166  
ccaggaggct catgggaaag tcc 23

<210> 167  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 167  
ccacgagtct aagcagatgt actgcgtgtt caaccgcaac gaggatgcct 50

<210> 168  
<211> 3143  
<212> DNA  
<213> Homo sapiens

<400> 168  
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agggatgatca gtgagcagaa ggatgcccggt ggccgaggcc cccaggtgg 100  
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<210> 169  
 <211> 802  
 <212> PRT  
 <213> Homo sapiens

<400> 169

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Gly	Gly	Asp	Gly	Glu	Glu	Ala	Glu	Pro	Glu	Gly	Met	Phe	Lys	Ala	20	25	30	
Cys	Glu	Asp	Ser	Lys	Arg	Lys	Ala	Arg	Gly	Tyr	Leu	Arg	Leu	Val	35	40	45	
Pro	Leu	Phe	Val	Leu	Leu	Ala	Leu	Leu	Val	Leu	Ala	Ser	Ala	Gly	50	55	60	
Val	Leu	Leu	Trp	Tyr	Phe	Leu	Gly	Tyr	Lys	Ala	Glu	Val	Met	Val	65	70	75	
Ser	Gln	Val	Tyr	Ser	Gly	Ser	Leu	Arg	Val	Leu	Asn	Arg	His	Phe	80	85	90	
Ser	Gln	Asp	Leu	Thr	Arg	Arg	Glu	Ser	Ser	Ala	Phe	Arg	Ser	Glu	95	100	105	
Thr	Ala	Lys	Ala	Gln	Lys	Met	Leu	Lys	Glu	Leu	Ile	Thr	Ser	Thr	110	115	120	
Arg	Leu	Gly	Thr	Tyr	Tyr	Asn	Ser	Ser	Ser	Val	Tyr	Ser	Phe	Gly	125	130	135	
Glu	Gly	Pro	Leu	Thr	Cys	Phe	Phe	Trp	Phe	Ile	Leu	Gln	Ile	Pro	140	145	150	
Glu	His	Arg	Arg	Leu	Met	Leu	Ser	Pro	Glu	Val	Val	Gln	Ala	Leu	155	160	165	
Leu	Val	Glu	Glu	Leu	Leu	Ser	Thr	Val	Asn	Ser	Ser	Ala	Ala	Val	170	175	180	
Pro	Tyr	Arg	Ala	Glu	Tyr	Glu	Val	Asp	Pro	Glu	Gly	Leu	Val	Ile	185	190	195	
Leu	Glu	Ala	Ser	Val	Lys	Asp	Ile	Ala	Ala	Leu	Asn	Ser	Thr	Leu	200	205	210	
Gly	Cys	Tyr	Arg	Tyr	Ser	Tyr	Val	Gly	Gln	Gly	Gln	Val	Leu	Arg	215	220	225	
Leu	Lys	Gly	Pro	Asp	His	Leu	Ala	Ser	Ser	Cys	Leu	Trp	His	Leu	230	235	240	
Gln	Gly	Pro	Lys	Asp	Leu	Met	Leu	Lys	Leu	Arg	Leu	Glu	Trp	Thr	245	250	255	
Leu	Ala	Glu	Cys	Arg	Asp	Arg	Leu	Ala	Met	Tyr	Asp	Val	Ala	Gly	260	265	270	
Pro	Leu	Glu	Lys	Arg	Leu	Ile	Thr	Ser	Val	Tyr	Gly	Cys	Ser	Arg	275	280	285	
Gln	Glu	Pro	Val	Val	Glu	Val	Leu	Ala	Ser	Gly	Ala	Ile	Met	Ala				

290										295					300				
Val	Val	Trp	Lys	Lys	Gly	Leu	His	Ser	Tyr	Tyr	Asp	Pro	Phe	Val					
				305					310					315					
Leu	Ser	Val	Gln	Pro	Val	Val	Phe	Gln	Ala	Cys	Glu	Val	Asn	Leu					
				320					325					330					
Thr	Leu	Asp	Asn	Arg	Leu	Asp	Ser	Gln	Gly	Val	Leu	Ser	Thr	Pro					
				335					340					345					
Tyr	Phe	Pro	Ser	Tyr	Tyr	Ser	Pro	Gln	Thr	His	Cys	Ser	Trp	His					
				350					355					360					
Leu	Thr	Val	Pro	Ser	Leu	Asp	Tyr	Gly	Leu	Ala	Leu	Trp	Phe	Asp					
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Ala	Tyr	Ala	Leu	Arg	Arg	Gln	Lys	Tyr	Asp	Leu	Pro	Cys	Thr	Gln					
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Gly	Gln	Trp	Thr	Ile	Gln	Asn	Arg	Arg	Leu	Cys	Gly	Leu	Arg	Ile					
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Leu	Gln	Pro	Tyr	Ala	Glu	Arg	Ile	Pro	Val	Val	Ala	Thr	Ala	Gly					
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Ile	Thr	Ile	Asn	Phe	Thr	Ser	Gln	Ile	Ser	Leu	Thr	Gly	Pro	Gly					
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Val	Arg	Val	His	Tyr	Gly	Leu	Tyr	Asn	Gln	Ser	Asp	Pro	Cys	Pro					
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Gly	Glu	Phe	Leu	Cys	Ser	Val	Asn	Gly	Leu	Cys	Val	Pro	Ala	Cys					
				455					460					465					
Asp	Gly	Val	Lys	Asp	Cys	Pro	Asn	Gly	Leu	Asp	Glu	Arg	Asn	Cys					
				470					475					480					
Val	Cys	Arg	Ala	Thr	Phe	Gln	Cys	Lys	Glu	Asp	Ser	Thr	Cys	Ile					
				485					490					495					
Ser	Leu	Pro	Lys	Val	Cys	Asp	Gly	Gln	Pro	Asp	Cys	Leu	Asn	Gly					
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Ser	Asp	Glu	Glu	Gln	Cys	Gln	Glu	Gly	Val	Pro	Cys	Gly	Thr	Phe					
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Thr	Phe	Gln	Cys	Glu	Asp	Arg	Ser	Cys	Val	Lys	Lys	Pro	Asn	Pro					
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Gln	Cys	Asp	Gly	Arg	Pro	Asp	Cys	Arg	Asp	Gly	Ser	Asp	Glu	Glu					
				545					550					555					
His	Cys	Asp	Cys	Gly	Leu	Gln	Gly	Pro	Ser	Ser	Arg	Ile	Val	Gly					
				560					565					570					
Gly	Ala	Val	Ser	Ser	Glu	Gly	Glu	Trp	Pro	Trp	Gln	Ala	Ser	Leu					
				575					580					585					

Gln Val Arg Gly	Arg His Ile Cys Gly	Gly Ala Leu Ile Ala Asp	590	595	600
Arg Trp Val Ile	Thr Ala Ala His Cys	Phe Gln Glu Asp Ser Met	605	610	615
Ala Ser Thr Val	Leu Trp Thr Val Phe	Leu Gly Lys Val Trp Gln	620	625	630
Asn Ser Arg Trp	Pro Gly Glu Val Ser	Phe Lys Val Ser Arg Leu	635	640	645
Leu Leu His Pro	Tyr His Glu Glu Asp	Ser His Asp Tyr Asp Val	650	655	660
Ala Leu Leu Gln	Leu Asp His Pro Val	Val Arg Ser Ala Ala Val	665	670	675
Arg Pro Val Cys	Leu Pro Ala Arg Ser	His Phe Phe Glu Pro Gly	680	685	690
Leu His Cys Trp	Ile Thr Gly Trp Gly	Ala Leu Arg Glu Gly Gly	695	700	705
Pro Ile Ser Asn	Ala Leu Gln Lys Val	Asp Val Gln Leu Ile Pro	710	715	720
Gln Asp Leu Cys	Ser Glu Ala Tyr Arg	Tyr Gln Val Thr Pro Arg	725	730	735
Met Leu Cys Ala	Gly Tyr Arg Lys Gly	Lys Lys Asp Ala Cys Gln	740	745	750
Gly Asp Ser Gly	Gly Pro Leu Val Cys	Lys Ala Leu Ser Gly Arg	755	760	765
Trp Phe Leu Ala	Gly Leu Val Ser Trp	Gly Leu Gly Cys Gly Arg	770	775	780
Pro Asn Tyr Phe	Gly Val Tyr Thr Arg	Ile Thr Gly Val Ile Ser	785	790	795
Trp Ile Gln Gln	Val Val Thr		800		

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 <211> 1327  
 <212> DNA  
 <213> Homo sapiens

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 caccatcaac ttcacctccc agatctccct caccgggccc ggtgtgcggg 150  
 tgcactatgg cttgtacaac cagtcggacc cctgccctgg agagttcctc 200

tgttctgtga atggactctg tgtccctgcc tgtgatgggg tcaaggactg 250  
 cccaacggc ctggatgaga gaaactgcgt ttgcagagcc acattccagt 300  
 gcaaagagga cagcacatgc atctcactgc ccaaggtctg tgatgggcag 350  
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 gagcactgtg actgtggcct ccagggcccc tccagccgca ttgttggtgg 550  
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 ggtcagctgg ggcctgggct gtggccggcc taactacttc ggcgtctaca 1200  
 cccgcatcac aggtgtgatc agctggatcc agcaagtggg gacctgagga 1250  
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 gcaactgcca agcaggggga caagtat 1327

<210> 171

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 171

taacagctgc ccaactgcttc cagg 24

<210> 172



<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 172  
taatccagca gtgcaggccg gg 22

<210> 173  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 173  
atggcctcca cgggtgctgtg gaccgtgttc ctgggcaagg tgtggcagaa 50

<210> 174  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
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<400> 174  
tgcctatgca ctgaggaggc agaag 25

<210> 175  
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<223> Synthetic oligonucleotide probe

<400> 175  
aggcagggac acagagtcca ttcac 25

<210> 176  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 176  
agtatgattt gccgtgcacc cagggccagt ggacgatcca gaacaggagg 50

<210> 177  
<211> 1510  
<212> DNA  
<213> Homo sapiens

<400> 177

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ctccagtccc ccagcccctg gccgagagaa gggctctacc ggccgggatt 150  
gctggaaaaca ccaagaggtg gtttttgttt tttaaaactt ctgtttcttg 200  
ggaggggggtg tggcgggggca ggatgagcaa ctccgttcct ctgctctgtt 250  
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agcatgaagg atgctacctc tccgtcggcc acagccagcc cttagaagac 450  
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aaaaaaaaaa 1510

<210> 178

<211> 354

<212> PRT

<213> Homo sapiens

<400> 178

Met Ser Asn Ser Val Pro Leu Leu Cys Phe Trp Ser Leu Cys Tyr  
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Cys Phe Ala Ala Gly Ser Pro Val Pro Phe Gly Pro Glu Gly Arg  
20 25 30

Leu Glu Asp Lys Leu His Lys Pro Lys Ala Thr Gln Thr Glu Val  
35 40 45

Lys Pro Ser Val Arg Phe Asn Leu Arg Thr Ser Lys Asp Pro Glu  
50 55 60

His Glu Gly Cys Tyr Leu Ser Val Gly His Ser Gln Pro Leu Glu  
65 70 75

Asp Cys Ser Phe Asn Met Thr Ala Lys Thr Phe Phe Ile Ile His  
80 85 90

Gly Trp Thr Met Ser Gly Ile Phe Glu Asn Trp Leu His Lys Leu  
95 100 105

Val Ser Ala Leu His Thr Arg Glu Lys Asp Ala Asn Val Val Val  
110 115 120

Val Asp Trp Leu Pro Leu Ala His Gln Leu Tyr Thr Asp Ala Val  
125 130 135

Asn Asn Thr Arg Val Val Gly His Ser Ile Ala Arg Met Leu Asp  
140 145 150

Trp Leu Gln Glu Lys Asp Asp Phe Ser Leu Gly Asn Val His Leu  
155 160 165

Ile Gly Tyr Ser Leu Gly Ala His Val Ala Gly Tyr Ala Gly Asn  
170 175 180

Phe Val Lys Gly Thr Val Gly Arg Ile Thr Gly Leu Asp Pro Ala  
185 190 195

Gly Pro Met Phe Glu Gly Ala Asp Ile His Lys Arg Leu Ser Pro  
200 205 210

Asp Asp Ala Asp Phe Val Asp Val Leu His Thr Tyr Thr Arg Ser  
215 220 225

Phe Gly Leu Ser Ile Gly Ile Gln Met Pro Val Gly His Ile Asp  
230 235 240

Ile Tyr Pro Asn Gly Gly Asp Phe Gln Pro Gly Cys Gly Leu Asn	245	250	255
Asp Val Leu Gly Ser Ile Ala Tyr Gly Thr Ile Thr Glu Val Val	260	265	270
Lys Cys Glu His Glu Arg Ala Val His Leu Phe Val Asp Ser Leu	275	280	285
Val Asn Gln Asp Lys Pro Ser Phe Ala Phe Gln Cys Thr Asp Ser	290	295	300
Asn Arg Phe Lys Lys Gly Ile Cys Leu Ser Cys Arg Lys Asn Arg	305	310	315
Cys Asn Ser Ile Gly Tyr Asn Ala Lys Lys Met Arg Asn Lys Arg	320	325	330
Asn Ser Lys Met Tyr Leu Lys Thr Arg Ala Gly Met Pro Phe Arg	335	340	345
Gly Asn Leu Gln Ser Leu Glu Cys Pro	350		

<210> 179  
 <211> 23  
 <212> DNA  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 179  
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<210> 180  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 180  
 gctattacaa cggttcttgc ggcagc 26

<210> 181  
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 <212> DNA  
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 <223> Synthetic oligonucleotide probe

<400> 181  
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<210> 182

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<212> DNA  
<213> Homo sapiens

<400> 182  
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caagtgatgc tgacgatccc tcaagtggta ataatgctcg tctcctctac 600  
agcttacttc aaggccagcc atatttttct gttgaaccaa caacaggagt 650  
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cagactatca gtgcagtgga tagagatgaa tccatagaag agcaccattt 1550  
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ctttccatgg gattcaagac agaagttatc attgctattc tcatttgcac 1850  
tatgatcata tttgggttta tttttttgac tttgggttta aaacaacgga 1900

gaaaacagat tctatttcct gagaaaagtg aagatttcag agagaatata 1950  
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<210> 264

<211> 772

<212> PRT

<213> Homo sapiens

<400> 264

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Leu	Trp	Pro	Cys	Leu	Gly	Ala	Thr	Glu	Asn	Ser	Gln	Thr	Lys	Lys
				20					25					30

Val	Lys	Gln	Pro	Val	Arg	Ser	His	Leu	Arg	Val	Lys	Arg	Gly	Trp
				35					40					45

Val	Trp	Asn	Gln	Phe	Phe	Val	Pro	Glu	Glu	Met	Asn	Thr	Thr	Ser
				50					55					60



His	His	Ile	Gly	Gln	Leu	Arg	Ser	Asp	Leu	Asp	Asn	Gly	Asn	Asn		65	70	75
Ser	Phe	Gln	Tyr	Lys	Leu	Leu	Gly	Ala	Gly	Ala	Gly	Ser	Thr	Phe		80	85	90
Ile	Ile	Asp	Glu	Arg	Thr	Gly	Asp	Ile	Tyr	Ala	Ile	Gln	Lys	Leu		95	100	105
Asp	Arg	Glu	Glu	Arg	Ser	Leu	Tyr	Ile	Leu	Arg	Ala	Gln	Val	Ile		110	115	120
Asp	Ile	Ala	Thr	Gly	Arg	Ala	Val	Glu	Pro	Glu	Ser	Glu	Phe	Val		125	130	135
Ile	Lys	Val	Ser	Asp	Ile	Asn	Asp	Asn	Glu	Pro	Lys	Phe	Leu	Asp		140	145	150
Glu	Pro	Tyr	Glu	Ala	Ile	Val	Pro	Glu	Met	Ser	Pro	Glu	Gly	Thr		155	160	165
Leu	Val	Ile	Gln	Val	Thr	Ala	Ser	Asp	Ala	Asp	Asp	Pro	Ser	Ser		170	175	180
Gly	Asn	Asn	Ala	Arg	Leu	Leu	Tyr	Ser	Leu	Leu	Gln	Gly	Gln	Pro		185	190	195
Tyr	Phe	Ser	Val	Glu	Pro	Thr	Thr	Gly	Val	Ile	Arg	Ile	Ser	Ser		200	205	210
Lys	Met	Asp	Arg	Glu	Leu	Gln	Asp	Glu	Tyr	Trp	Val	Ile	Ile	Gln		215	220	225
Ala	Lys	Asp	Met	Ile	Gly	Gln	Pro	Gly	Ala	Leu	Ser	Gly	Thr	Thr		230	235	240
Ser	Val	Leu	Ile	Lys	Leu	Ser	Asp	Val	Asn	Asp	Asn	Lys	Pro	Ile		245	250	255
Phe	Lys	Glu	Ser	Leu	Tyr	Arg	Leu	Thr	Val	Ser	Glu	Ser	Ala	Pro		260	265	270
Thr	Gly	Thr	Ser	Ile	Gly	Thr	Ile	Met	Ala	Tyr	Asp	Asn	Asp	Ile		275	280	285
Gly	Glu	Asn	Ala	Glu	Met	Asp	Tyr	Ser	Ile	Glu	Glu	Asp	Asp	Ser		290	295	300
Gln	Thr	Phe	Asp	Ile	Ile	Thr	Asn	His	Glu	Thr	Gln	Glu	Gly	Ile		305	310	315
Val	Ile	Leu	Lys	Lys	Lys	Val	Asp	Phe	Glu	His	Gln	Asn	His	Tyr		320	325	330
Gly	Ile	Arg	Ala	Lys	Val	Lys	Asn	His	His	Val	Pro	Glu	Gln	Leu		335	340	345
Met	Lys	Tyr	His	Thr	Glu	Ala	Ser	Thr	Thr	Phe	Ile	Lys	Ile	Gln				

	350		355		360
Val Glu Asp Val	Asp Glu Pro Pro Leu Phe	Leu Leu Pro Tyr Tyr			
	365	370		375	
Val Phe Glu Val	Phe Glu Glu Thr Pro Gln Gly Ser Phe Val Gly				
	380	385		390	
Val Val Ser Ala	Thr Asp Pro Asp Asn Arg Lys Ser Pro Ile Arg				
	395	400		405	
Tyr Ser Ile Thr	Arg Ser Lys Val Phe Asn Ile Asn Asp Asn Gly				
	410	415		420	
Thr Ile Thr Thr	Ser Asn Ser Leu Asp Arg Glu Ile Ser Ala Trp				
	425	430		435	
Tyr Asn Leu Ser	Ile Thr Ala Thr Glu Lys Tyr Asn Ile Glu Gln				
	440	445		450	
Ile Ser Ser Ile	Pro Leu Tyr Val Gln Val Leu Asn Ile Asn Asp				
	455	460		465	
His Ala Pro Glu	Phe Ser Gln Tyr Tyr Glu Thr Tyr Val Cys Glu				
	470	475		480	
Asn Ala Gly Ser	Gly Gln Val Ile Gln Thr Ile Ser Ala Val Asp				
	485	490		495	
Arg Asp Glu Ser	Ile Glu Glu His His Phe Tyr Phe Asn Leu Ser				
	500	505		510	
Val Glu Asp Thr	Asn Asn Ser Ser Phe Thr Ile Ile Asp Asn Gln				
	515	520		525	
Asp Asn Thr Ala	Val Ile Leu Thr Asn Arg Thr Gly Phe Asn Leu				
	530	535		540	
Gln Glu Glu Pro	Val Phe Tyr Ile Ser Ile Leu Ile Ala Asp Asn				
	545	550		555	
Gly Ile Pro Ser	Leu Thr Ser Thr Asn Thr Leu Thr Ile His Val				
	560	565		570	
Cys Asp Cys Gly	Asp Ser Gly Ser Thr Gln Thr Cys Gln Tyr Gln				
	575	580		585	
Glu Leu Val Leu	Ser Met Gly Phe Lys Thr Glu Val Ile Ile Ala				
	590	595		600	
Ile Leu Ile Cys	Ile Met Ile Ile Phe Gly Phe Ile Phe Leu Thr				
	605	610		615	
Leu Gly Leu Lys	Gln Arg Arg Lys Gln Ile Leu Phe Pro Glu Lys				
	620	625		630	
Ser Glu Asp Phe	Arg Glu Asn Ile Phe Gln Tyr Asp Asp Glu Gly				
	635	640		645	

Gly	Gly	Glu	Glu	Asp	Thr	Glu	Ala	Phe	Asp	Ile	Ala	Glu	Leu	Arg	650	655	660
Ser	Ser	Thr	Ile	Met	Arg	Glu	Arg	Lys	Thr	Arg	Lys	Thr	Thr	Ser	665	670	675
Ala	Glu	Ile	Arg	Ser	Leu	Tyr	Arg	Gln	Ser	Leu	Gln	Val	Gly	Pro	680	685	690
Asp	Ser	Ala	Ile	Phe	Arg	Lys	Phe	Ile	Leu	Glu	Lys	Leu	Glu	Glu	695	700	705
Ala	Asn	Thr	Asp	Pro	Cys	Ala	Pro	Pro	Phe	Asp	Ser	Leu	Gln	Thr	710	715	720
Tyr	Ala	Phe	Glu	Gly	Thr	Gly	Ser	Leu	Ala	Gly	Ser	Leu	Ser	Ser	725	730	735
Leu	Glu	Ser	Ala	Val	Ser	Asp	Gln	Asp	Glu	Ser	Tyr	Asp	Tyr	Leu	740	745	750
Asn	Glu	Leu	Gly	Pro	Arg	Phe	Lys	Arg	Leu	Ala	Cys	Met	Phe	Gly	755	760	765
Ser	Ala	Val	Gln	Ser	Asn	Asn									770		

<210> 265  
 <211> 349  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 24, 60, 141, 226, 228, 249, 252  
 <223> unknown base

<400> 265  
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 gaatattttt taaaatggat agagaactgc aagatgagta ttgggtaatc 100  
 attcaagcca aggacatgat tggtcagcca ggagcgttgt ntggaacaac 150  
 aagtgtatta attaaacttt cagatgttaa tgacaataag cctatatatta 200  
 aagaaagttt ataccgcttg actgtntntg aatctgcacc cactgggant 250  
 tntataggaa caatcatggc atatgataat gacataggag agaatgcaga 300  
 aatggattac agcattgaag aggatgattc gcaaacattt gacattatt 349

<210> 266  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 266  
cttgactgtc tctgaatctg caccc 25

<210> 267  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 267  
aagtgggtgga agcctccagt gtgg 24

<210> 268  
<211> 52  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 268  
ccactacggt attagagcaa aagttaaaaa ccatcatggt tcctggagca 50  
gc 52

<210> 269  
<211> 2747  
<212> DNA  
<213> Homo sapiens

<400> 269  
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cccaaccccc acccagagct tctccagcgg cggcgcgagc agcagggctc 100  
cccgccttaa cttcctccgc ggggcccagc caccttcggg agtccggggt 150  
gcccacctgc aaactctccg cttctgtcac ctgccacccc tgagccagcg 200  
cgggcccccg agcgagtcac ggccaacgcg gggctgcagc tgttgggctt 250  
cattctcgcc ttctgggat ggatcggcgc catcgtcagc actgccctgc 300  
cccagtgag gatttactcc tatgccggcg acaacatcgt gaccgcccag 350  
gccatgtacg aggggctgtg gatgtcctgc gtgtcgcaga gcaccgggca 400  
gatccagtgc aaagtctttg actccttgct gaatctgagc agcacattgc 450  
aagcaacccg tgccttgatg gtgggttgga tcctcctggg agtgatagca 500  
atctttgtgg ccaccgttgg catgaagtgt atgaagtgct tggaagacga 550  
tgagggtgcag aagatgagga tggctgtcat tgggggtgcg atatttcttc 600



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 ccactgaaca aaacctacac acataccttc atgtgggttca gtgccttcct 2250  
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 gatgttgtgg ggatccagtg agatagaata catgtaagtg tggttttgta 2650  
 atttaaaaag tgctatacta agggaaagaa ttgaggaatt aactgcatac 2700  
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<210> 270

<211> 211

<212> PRT

<213> Homo sapiens

<400> 270

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Leu	Gly	Trp	Ile	Gly	Ala	Ile	Val	Ser	Thr	Ala	Leu	Pro	Gln	Trp
				20					25					30
Arg	Ile	Tyr	Ser	Tyr	Ala	Gly	Asp	Asn	Ile	Val	Thr	Ala	Gln	Ala
				35					40					45
Met	Tyr	Glu	Gly	Leu	Trp	Met	Ser	Cys	Val	Ser	Gln	Ser	Thr	Gly
				50					55					60
Gln	Ile	Gln	Cys	Lys	Val	Phe	Asp	Ser	Leu	Leu	Asn	Leu	Ser	Ser
				65					70					75
Thr	Leu	Gln	Ala	Thr	Arg	Ala	Leu	Met	Val	Val	Gly	Ile	Leu	Leu
				80					85					90
Gly	Val	Ile	Ala	Ile	Phe	Val	Ala	Thr	Val	Gly	Met	Lys	Cys	Met
				95					100					105
Lys	Cys	Leu	Glu	Asp	Asp	Glu	Val	Gln	Lys	Met	Arg	Met	Ala	Val
				110					115					120

Ile Gly Gly Ala	Ile Phe Leu Leu Ala	Gly Leu Ala Ile Leu Val
125	130	135
Ala Thr Ala Trp	Tyr Gly Asn Arg Ile	Val Gln Glu Phe Tyr Asp
140	145	150
Pro Met Thr Pro	Val Asn Ala Arg Tyr	Glu Phe Gly Gln Ala Leu
155	160	165
Phe Thr Gly Trp	Ala Ala Ala Ser Leu	Cys Leu Leu Gly Gly Ala
170	175	180
Leu Leu Cys Cys	Ser Cys Pro Arg Lys	Thr Thr Ser Tyr Pro Thr
185	190	195
Pro Arg Pro Tyr	Pro Lys Pro Ala Pro	Ser Ser Gly Lys Asp Tyr
200	205	210

Val

<210> 271  
 <211> 564  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 21, 69, 163, 434, 436, 444  
 <223> unknown base

<400> 271  
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 ctccctatgc tggcgacaac atcgtgaccg cccagcccat gtacgagggg 150  
 ctgtggatgt ccngcgtgtc gcagagcacc gggcagatcc agtgcaaagt 200  
 ctttgactcc ttgctgaatc tgàgcagcac attgcaagca acccgtgcct 250  
 tgatggtggt tggcatcctc ctgggagtga tagcaatctt tgtggccacc 300  
 gttggcatga agtgtatgaa gtgcttgga gacgatgagg tgcagaagat 350  
 gaggatggct gtcattgggg gcgcgatatt tcttcttgca ggtctggcta 400  
 ttttagttgc cacagcatgg tatggcaata gaancnttca acanttctat 450  
 gaccctatga cccagtcaa tgccagggtac gaatttggtc aggctctctt 500  
 cactggctgg gctgctgctt ctctctgcct tctgggaggt gccctacttt 550  
 gctgttcctg tccc 564

<210> 272  
 <211> 498

<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 30, 49, 102, 141, 147, 171, 324-325, 339-341  
<223> unknown base

<400> 272  
acccttgacc caacgcggcc ccccgaccgn ttcattggcca aacgcgggnc 50  
tccagctggtt gggcttcatt ctccccctcc tgggatggac cggcgcccat 100  
cntcagcact gccctgcccc agtggaggat ttactcctat nccggcnaca 150  
acatcgtgac cgcccaggcc ntgtacgagg ggctgtggat gtcctgcgtg 200  
tcgcagagca ccgggcagat ccagtgcaaa gtctttgact cccttgctga 250  
atctgagcag cacattgcaa gcaaccctgt ccttgatggt ggttggcatc 300  
ctcctgggag tgatagcaat cttnttggcc accgttgtnn ntgaagtgtg 350  
tgaagtgtt ggaagacgat gaggtgcaga agatgaggat ggctgtcatt 400  
gggggcgca tatttcttct tgcaggtctg gctatttttag ttgccacagc 450  
atggtatggc aatagaatcg ttcaagaatt ctatgaccct atgaccga 498

<210> 273  
<211> 552  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 25, 57, 67, 94-95, 116, 152, 165, 212, 233, 392-394  
<223> unknown base

<400> 273  
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gatgaancgc gccatcntca gactccctgc cccatggaga tttnnccat 100  
gctggcgaca acatcntgac cccagccat gtacgagggg ctttgaacgt 150  
cngcgtgtcg cagancaccg ggcagatcca gtgcaaagtc tttgactcct 200  
tgctgaatct gngcagcaca ttgcagcaac ccntgccctg atggtggttg 250  
gcatcctcct gggagtgata gcaatctttg tggccaccgt tggcatgaag 300  
tgtatgaagt gcttggaaga cgatgaggtg cagaagatga ggatggctgt 350  
cattgggggc gcgatatttc ttcttgacgg tctggctatt tnnngttgcc 400  
acagcatggt atggcaatag aatcgttcaa gaattctatg accctatgac 450



cccagtcaat gccaggtagc aatttgggtca ggctctcttc actgggtggg 500  
ctgtctgcttc tctctgcctt ctgggagggtg ccctactttg ctgttcctgc 550  
ga 552

<210> 274  
<211> 526  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 25, 50, 60, 123, 127, 370, 395, 397-398, 402-403, 405-407  
<223> unknown base

<400> 274  
attctcccct cctggatgga tcgcncacc gtcacattgc cttccccan 50  
tggaggattn actcctatgc tggcgacaac atcgtgacct ccaggccat 100  
ttaccgaggg gctttggatg tcntgcntgt cgcagagcac cgggcagatc 150  
ccagtgcaaa gtctttgact ccttgctgaa tctgagcagc acattgcaag 200  
caaccctgtc cttgatgggg ttggcatcct cctgggagtg atagcaacct 250  
ttgtggccac cggtggcatg aagtgtatga agtgcttga agacgatgag 300  
gtgccagaag atgaggatgg ctgtcattgg gggcgcgata tttcttgttg 350  
caggtctggc tatttttagtn gccacagcat ggtatggcaa tagantnntt 400  
cnngnnntct atgaccctat gacccagtc aatgccagg acgaatttgg 450  
tcaggctctc ttactgggt gggctgctgc ttctctctgc cttctgggag 500  
gtgccctact ttgctgttcc tgtccc 526

<210> 275  
<211> 398  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 22, 61, 91, 144, 238-239, 262, 265-266, 271, 274  
<223> unknown base

<400> 275  
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gcagcacatt ncaagcaacc ccttgcccttg aagggtggtg ncatcccccc 100  
tgggagtga tagcaatctt tgtggccacc gttggcatga agtntatgaa 150  
gtgcttggaa gacgatgagg tgcagaagat gaggatggct gtcattgggg 200

gcgcgatatt tcttcttgca ggtctggcta ttttagtnnc cacagcatgg 250  
 tatggcaata gnatnnttcg nggnttctat gaccctatga cccagtcaa 300  
 tgccaggtag gaatttggtc aggctctctt cactggctgg gctgctgctt 350  
 ctctctgcct tctgggaggt gccctacttt gctgttcctg tccccgaa 398

<210> 276  
 <211> 495  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 39, 58, 130, 234, 314, 364, 427, 450, 461, 476  
 <223> unknown base

<400> 276  
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 ttgtgacngc ccaggccatg tacggggggc tgtggatgtc ctgctgtctg 100  
 cagagcaccg ggcagatcca gtgcaaagtn tttgactcct tgctgaattt 150  
 gagcagcaca ttgcaagcaa cccgtgcctt gatggtggtt ggcactcttc 200  
 tgggagtgat agcaatcttt gtggccaccg tggnaatgaa gtgtatgaag 250  
 tgcttggaag acgatgaggt gcagaagatg aggatggctg tcattggggg 300  
 cgcgatattt cttnttgcat gtctggctat tttagttgcc acagcatggt 350  
 atggcaatag aatngttcaa gaattttatg accctatgac cccagtcaat 400  
 gccaggtagc aatttggtca ggcttnttc actggctggg ctgctgcttn 450  
 tttctgcctt ntgggaggtg ccctantttg ctgttcctgc gaacc 495

<210> 277  
 <211> 200  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 34, 87, 138, 147, 163, 165-166, 172  
 <223> unknown base

<400> 277  
 tcataggggg gcgcgatatt ttttcttgca ggtntgggta ttttagttgc 50  
 cacagcatgg tatggcaata gaatcggtca agaattntat gaccctatga 100  
 cccagtcaa tgccaggtag gaatttggtc aggctctntt cactggntgg 150  
 gctgctgctt ctntnngcct tntgggaggt gccctacttt gctgttcctg 200

<210> 278  
<211> 542  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 26, 43, 55, 77, 198, 361-362, 391-392, 396  
<223> unknown base

<400> 278  
ttcctgggat ggatccgccc ccatactcac atgccctgcc cnttgagat 50  
ttacncctat gctggcgaac aacatcntga ccgcccaggc catgtacgag 100  
gggctgtgga atgtcctgcg tgtcccagag caccgggcag atccagtgc 150  
aagtctttga ctcttgctg aatctgagca gcacattgca agcaaccntg 200  
ccttgatggg ggttggcatc ctctgggag tgatagcaat ctttgtggcc 250  
accgttggca tgaaagtgt tgaagtgcct ggaagacgat gaggtgcaga 300  
agatgaggat ggctgtcatt gggggcgca tatttcttct tgcaggctctg 350  
gctatttttag nngccacagc atggatggc aatcagaccc nntcanaaac 400  
tctatgaccc tatgaccca gtcaatgcc ggtacgaatt tggtcaggct 450  
ctcttcaactg gctgggctgc tgcttctctc tgccttctgg gaggtgccct 500  
actttgctgt tcctgtcccc gaaaaacaac ctcttaccga cg 542

<210> 279  
<211> 548  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 90, 115, 147, 228, 387  
<223> unknown base

<400> 279  
cggggctgca gctgttggg ttcactctgc ttcctgggat ggaatcggcg 50  
ccatcgtcag cactgccctg cccatggag gatttactcn tatgctggcg 100  
acaacatcgt gaccnccag gccatgtacg aggggctgtg gatgtcngcg 150  
tgtcgcagag caccgggcag atccagtgc aagtctttga ctcttgctg 200  
aatctgagca gcacattgca agcaaccntg ccttgatggg ggttggcatc 250  
ctctgggag tgatagcaat ctttgtggcc accgttggca tgaagtgtat 300  
gaagtgcctg gaagacgatg aggtgcagaa gatgaggatg gctgtcattg 350

ggggcgcgat atttcttctt gcaggctctgg ctatttntag ttgccacagc 400  
 atggtatggc aatagaatcg ttcaagaatt ctatgaccct atgaccccag 450  
 tcaatgccag gtacgaattt ggtcaggctc tcttcactgg ctgggctgct 500  
 gcttctctct gccttctggg aggtgcccta ctttgctgtt cctgcgaa 548

<210> 280  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 280  
 cgagcgagtc atggccaacg c 21

<210> 281  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 281  
 gtgtcacacg tagtctttcc cgctgg 26

<210> 282  
 <211> 43  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 282  
 ctgcagctgt tgggcttcat tctcgccctc ctgggatgga tcg 43

<210> 283  
 <211> 2285  
 <212> DNA  
 <213> Homo sapiens

<400> 283  
 gcgtgccgtc agctcgccgg gcaccgcggc ctcgccctcg ccctccgccc 50  
 ctgcgcctgc accgcgtaga ccgaccccc cctccagcgc gccaccccg 100  
 tagaggaccc ccgcccgtgc cccgaccggt ccccgccctt ttgtaaaact 150  
 taaagcgggc gcagcattaa cgcttcccgc cccggtgacc tctcaggggt 200  
 ctccccgcca aaggtgctcc gccgctaagg aacatggcga aggtggagca 250  
 ggtcctgagc ctcgagccgc agcacgagct caaattccga ggtcccttca 300

ccgatgttgt caccaccaac ctaaagcttg gcaacccgac agaccgaaat 350  
 gtgtgtttta aggtgaagac tacagcacca cgtaggtact gtgtgaggcc 400  
 caacagcggga atcatcgatg caggggcctc aattaatgta tctgtgatgt 450  
 tacagccttt cgattatgat cccaatgaga aaagtaaaca caagtttatg 500  
 gttcagtcta tgtttgctcc aactgacact tcagatatgg aagcagtatg 550  
 gaaggaggca aaaccggaag accttatgga ttcaaaactt agatgtgtgt 600  
 ttgaattgcc agcagagaat gataaaccac atgatgtaga aataaataaa 650  
 attatatcca caactgcac aaagacagaa acaccaatag tgtctaagtc 700  
 tctgagttct tctttggatg acaccgaagt taagaagggt atggaagaat 750  
 gtaagaggct gcaaggtgaa gttcagaggc tacgggagga gaacaagcag 800  
 ttcaaggaag aagatggact gcggatgagg aagacagtgc agagcaacag 850  
 ccccathttca gcattagccc caactgggaa ggaagaaggc cttagcacc 900  
 ggctcttggc tctggtggtt ttgttcttta tcgttggtgt aattattggg 950  
 aagattgcct tgtagaggta gcatgcacag gatggtaa at tggattggtg 1000  
 gatccaccat atcatgggat ttaaatttat cataaccatg tgtaaaaaga 1050  
 aattaatgta tgatgacac tcacaggtct tgcctttaa ttaccctcc 1100  
 ctgcacacac atacacagat acacacacac aaatataatg taacgatctt 1150  
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 ctttattaat gacaaggga accatgagta atgccacaat ggcatattgt 1250  
 aaatgtcatt ttaaacattg gtaggccttg gtacatgatg ctggattacc 1300  
 tctcttaaaa tgacaccctt cctcgctgt tggtgctggc ccttggggag 1350  
 ctggagccca gcatgctggg gagtgcggtc agtccacac agtagtccc 1400  
 acgtggccca ctcccgccc aggtgcttt ccgtgtcttc agttctgtcc 1450  
 aagccatcag ctcttgga ctgatgaaca gagtcagaag cccaaaggaa 1500  
 ttgcaactgt gcagcatcag acgtactcgt cataagtga aggcgtgtgt 1550  
 tgactgattg acccagcgt ttggaaataa atggcagtgc tttgttact 1600  
 taaagggacc aagctaaatt tgtattggtt catgtagtga agtcaaactg 1650  
 ttattcagag atgtttaatg catatttaac ttatttaatg tatttcatt 1700  
 catgttttct tattgtcaca agagtacagt taatgctgcg tgctgctgaa 1750

ctctgttggg tgaactggta ttgctgctgg agggctgtgg gctcctctgt 1800  
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 agagctgcca ggaagtgttt tttctgggtc agtaaataac aactgtcata 1900  
 gggagggaaa ttctcagtag tgacagtcaa ctctaggtta ccttttttaa 1950  
 tgaagagtag tcagtcttct agattgttct tataccacct ctcaaccatt 2000  
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 ggacctagcc tggagtcagg acaaatggat cgggctgcag agggtagaa 2100  
 gcgagggcac cagcagttgt ggggtggggag caagggaaga gagaaactct 2150  
 tcagcgaatc cttctagtag tagttgagag tttgactgtg aattaatttt 2200  
 atgccataaa agaccaaccc agttctgttt gactatgtag catcttgaaa 2250  
 agaaaaatta taataaagcc ccaaaattaa gaaaa 2285

<210> 284

<211> 243

<212> PRT

<213> Homo sapiens

<400> 284

Met	Ala	Lys	Val	Glu	Gln	Val	Leu	Ser	Leu	Glu	Pro	Gln	His	Glu	1	5	10	15
Leu	Lys	Phe	Arg	Gly	Pro	Phe	Thr	Asp	Val	Val	Thr	Thr	Asn	Leu	20	25	30	
Lys	Leu	Gly	Asn	Pro	Thr	Asp	Arg	Asn	Val	Cys	Phe	Lys	Val	Lys	35	40	45	
Thr	Thr	Ala	Pro	Arg	Arg	Tyr	Cys	Val	Arg	Pro	Asn	Ser	Gly	Ile	50	55	60	
Ile	Asp	Ala	Gly	Ala	Ser	Ile	Asn	Val	Ser	Val	Met	Leu	Gln	Pro	65	70	75	
Phe	Asp	Tyr	Asp	Pro	Asn	Glu	Lys	Ser	Lys	His	Lys	Phe	Met	Val	80	85	90	
Gln	Ser	Met	Phe	Ala	Pro	Thr	Asp	Thr	Ser	Asp	Met	Glu	Ala	Val	95	100	105	
Trp	Lys	Glu	Ala	Lys	Pro	Glu	Asp	Leu	Met	Asp	Ser	Lys	Leu	Arg	110	115	120	
Cys	Val	Phe	Glu	Leu	Pro	Ala	Glu	Asn	Asp	Lys	Pro	His	Asp	Val	125	130	135	
Glu	Ile	Asn	Lys	Ile	Ile	Ser	Thr	Thr	Ala	Ser	Lys	Thr	Glu	Thr	140	145	150	

Pro Ile Val Ser Lys Ser Leu Ser Ser Ser Leu Asp Asp Thr Glu  
155 160 165

Val Lys Lys Val Met Glu Glu Cys Lys Arg Leu Gln Gly Glu Val  
170 175 180

Gln Arg Leu Arg Glu Glu Asn Lys Gln Phe Lys Glu Glu Asp Gly  
185 190 195

Leu Arg Met Arg Lys Thr Val Gln Ser Asn Ser Pro Ile Ser Ala  
200 205 210

Leu Ala Pro Thr Gly Lys Glu Glu Gly Leu Ser Thr Arg Leu Leu  
215 220 225

Ala Leu Val Val Leu Phe Phe Ile Val Gly Val Ile Ile Gly Lys  
230 235 240

Ile Ala Leu

<210> 285  
<211> 418  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 40, 53, 68, 119, 134, 177-178, 255  
<223> unknown base

<400> 285  
gtcagtccttc tagattgtcc ttatcccacc tttcaaccan tactcacatt 50  
tcnagcgccc aggtccangt ctgagcctga cttccccttg gggacctagc 100  
ctggagtcag gacaatggnt cgggctgcag aggnnttagaa gcgagggcac 150  
cagcagtttt ggggtggggag caagggnga gagaaactct tcagcgaatc 200  
cttctagtag tagttgagag tttgactgtg aattaatttt atgccataaa 250  
agacnaaccc agttctgttt gactatgtag catcttgaaa agaaaaatta 300  
taataaagcc ccaaaattaa gaattctttt gtcattttgt cacatttgct 350  
ctatgggggg aattattatt ttatcatttt tattattttg ccattggaag 400  
gttaacttta aaatgagc 418

<210> 286  
<211> 543  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 73, 97

<223> unknown base

<400> 286

tattgtaaag gccattttaa accattggta ggccttggta catgatgctg 50  
gattacctcc ttaaatagaca ccnttcctcg cctgttgggtg ctggccnttg 100  
gggagctgga gccccagcat gctggggagt gcggtcagct ccacacagta 150  
gtccccacgt ggcccactcc cggcccaggc tgctttccgt gtcttcagtt 200  
ctgtccaagc catcagctcc ttgggactga tgaacagagt cagaagccca 250  
aaggaattgc cactgtggca gcatcagacg tactcgtcat aagtgaagg 300  
cgtgtgttga ctgattgacc cagcgctttg gaaataaatg gcagtgcctt 350  
gttcacttaa agggaccaag ctaaattgta ttggttcatg tagtgaagtc 400  
aaactgttat tcagagatgt ttaatgcata tttaacttat ttaatgtatt 450  
tcattctcatg ttttcttatt gtcacaagag tacagttaat gctgcgtgct 500  
gctgaactct gttgggtgaa ctggtattgc tgctggaggg ctg 543

<210> 287

<211> 270

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 38, 64, 72, 164, 198, 200, 220, 222, 229, 242

<223> unknown base

<400> 287

ccctggtggt tttgttcttt aattcgttgg tgtaattntt gggaagattg 50  
cttgtagagg tagnatgcac cnggctggta aattggattg gtggatccac 100  
catatccatg ggatttaaata ttatcataac catgtgtaaa agaaattaa 150  
tgtatgatga catntcacag gtattgcctt taaattaccc atccctgnan 200  
acacatacac agatacacan anacaaatnt aatgtaacga tnttttagaa 250  
agttaaaaat gtatagtaac 270

<210> 288

<211> 428

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 35, 116, 129, 197, 278, 294, 297, 349, 351

<223> unknown base



<400> 288  
 ggtggcccat tcccggccca ggctgctttc cggtnnttcag ttctgtccaa 50  
 gccatcagct ccttgggact gatgaacaga gtcagaagcc caaaggaatt 100  
 gcaactgtggc agcatnagac gtacttgtna taagtgagag gcgtgtgttg 150  
 actgattgac ccagcgcttt ggaaataaat ggcagtgcct tgttcantta 200  
 aagggaacaa gctaaatttg tattgggttca tgtagtgaag tcaaactgtt 250  
 attcagagat gtttaatgca tatttaantt atttaatgta tttnatntca 300  
 tgttttctta ttgtcacaag agtacagtta atgctgcgtg ctgctgaant 350  
 ntgttgggtg aactgggtatt gctgctggag ggctgtgggc tcctctgtct 400  
 ttggagagtc tggatcatgtg gaggtggg 428

<210> 289  
 <211> 320  
 <212> DNA  
 <213> Homo sapiens

<400> 289  
 tgctttccgt gtcttcagtt ctgtccaagc catcagctcc ttgggacttg 50  
 atgaacagag tcagaagccc aaaggaattg cactgtggca gcatcagacg 100  
 tactcgatcat aagtgaagagg cgtgtgttga ctgattgacc cagcgctttg 150  
 gaaataaatg gcagtgcctt gttcacttaa agggaccaag ctaaatttgt 200  
 attgggttcat gtagtgaagt caaactgtta ttcagagatg tttaatgcat 250  
 atttaactta tttaatgtat ttcactctcat gttttcttat tgtcacaaga 300  
 gtacagttaa tgctgcgtgc 320

<210> 290  
 <211> 609  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 57, 60, 186, 235, 244, 304, 339, 355, 359, 361, 387, 432, 441,  
 447, 481, 513, 532, 584, 598  
 <223> unknown base

<400> 290  
 aaacctttaa aagttgaggg gaaaagaatg atcctttatt aatgacaagg 50  
 gaaacctnqn gtaatgccac aatggcatat tgtaaagtgc attttaaaca 100  
 ttggtaggcc ttggtacatg atgctggatt acctctctta aaatgacacc 150  
 cttcctcgcc tgttggtgct ggcccttggg gagctngagc ccagcatgct 200

ggggagtgcg gtctgctcca cacagtagtc cccangtggc ccantcccgg 250  
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 ggantgatga acagagtcag aagcccaaag gaattgcant gtggcagcat 350  
 canganfant ngtcataagt gagaggcgtg tgttgantga ttgaccagc 400  
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 atgcatattt aanttattta atgtatttca tntcatgttt tcttattgtc 550  
 acaagggtag agttaatgct gcgtgctgct gaantctgtt ggggtgaantg 600  
 gtattgctg 609

<210> 291  
 <211> 493  
 <212> DNA  
 <213> Homo sapiens

<400> 291  
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 cacagtagtc cccacgtggc ccactcccgg cccaggctgc tttccgtgtc 100  
 ttcagttctg tccaagccat cagctccttg ggactgatga acagagtcag 150  
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 gagaggcgtg tgttgactga ttgaccagc gctttggaaa taaatggcag 250  
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 tgaagtcaaa ctgttattca gagatgttta atgcatattt aacttattta 350  
 atgtatttca tctcatgttt tcttattgtc acaagagtag agttaatgct 400  
 gcgtgctgct gaactctgtt ggggtgaactg gtattgctgc tggagggtg 450  
 tgggctcctc tgtctctgga gagtctggtc atgtggaggt ggg 493

<210> 292  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 292  
 gcaccaccgt aggtacttgt gtgaggc 27

<210> 293  
 <211> 23  
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 293

aaccaccaga gccaaagagcc ggg 23

<210> 294

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 294

cagcgggaatc atcgatgcag gggcctcaat taatgtatct gtgatgttac 50

<210> 295

<211> 2530

<212> DNA

<213> Homo sapiens

<400> 295

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gctctgatct cagctgacag tgccctcggg gaccaaaca gcctggcagg 150  
gtctcacttt gttgccaggt ctggagttca gtgccatgat catggtttac 200  
tgcagccttg acctcctggg ttcaagcgt cctgctgagt agctgggact 250  
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atttttcacc cctgggtgga cctcattga tggatctgaa atggaatggg 350  
attttatgtg gcaattgaga aaggtagccc ggattgtcag tgaaaggact 400  
ttccatctca ccagccccgc atttgaggca gatgctaaga tgatggtaaa 450  
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ctgaattgga ggattatctt tcctatgaga ctgtctttga gaatggcacc 550  
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cctttcagca cagctgtgaa gctttccacg ggctgtagt gcattctcat 750  
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aataaaagtg gaggcaagaa acgtcgaggt tctaagagga gcaggagaga 900  
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cccctaaaat acgcccagat ttgcctctgg attcacggga acgatgccaa 1500  
ttgtgcttac ggctaacaga gacctgaaac agggcggtgt atcatctaaa 1550  
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ctcagggtcc tactctaaga agaactaat aggatgctgg ttgtgtatta 1900  
aatgtgaaat tgcatagata aaggtagatg gtaaagcaat tagtatcaga 1950  
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ttcagctcat gccctcaatg tttatattgt gttatctgtt gggctctggga 2050  
catttagttt agtttttttg aagaattaca aatcagaaga aaaagcaagc 2100  
attataaaca aaactaataa ctgttttact gctttaagaa ataacaatta 2150  
caatgtgtat tatttaaaaa tgggagaaat agtttgttct atgaaataaa 2200  
cctagtttag aaatagggaa gctgagacat tttaagatct caagttttta 2250  
tttaactaat actcaaaata tggacttttc atgtatgcat agggaagaca 2300

cttcacaaat tatgaatgat catgtgttga aagccacatt attttatgct 2350  
 atacattcta tgtatgaggt gctacatttt taggacaaaag aattctgtaa 2400  
 tctttttcaa gaaagagtct ttttctcctt gacaaaaatcc agcttttgta 2450  
 tgaggactat aggggtgaatt ctctgattag taattttaga tatgtccttt 2500  
 cctaaaaatg aataaaaattt atgaatatga 2530

<210> 296  
 <211> 413  
 <212> PRT  
 <213> Homo sapiens

<400> 296  
 Met Glu Asn Met Leu Leu Trp Leu Ile Phe Phe Thr Pro Gly Trp  
 1 5 10 15  
 Thr Leu Ile Asp Gly Ser Glu Met Glu Trp Asp Phe Met Trp His  
 20 25 30  
 Leu Arg Lys Val Pro Arg Ile Val Ser Glu Arg Thr Phe His Leu  
 35 40 45  
 Thr Ser Pro Ala Phe Glu Ala Asp Ala Lys Met Met Val Asn Thr  
 50 55 60  
 Val Cys Gly Ile Glu Cys Gln Lys Glu Leu Pro Thr Pro Ser Leu  
 65 70 75  
 Ser Glu Leu Glu Asp Tyr Leu Ser Tyr Glu Thr Val Phe Glu Asn  
 80 85 90  
 Gly Thr Arg Thr Leu Thr Arg Val Lys Val Gln Asp Leu Val Leu  
 95 100 105  
 Glu Pro Thr Gln Asn Ile Thr Thr Lys Gly Val Ser Val Arg Arg  
 110 115 120  
 Lys Arg Gln Val Tyr Gly Thr Asp Ser Arg Phe Ser Ile Leu Asp  
 125 130 135  
 Lys Arg Phe Leu Thr Asn Phe Pro Phe Ser Thr Ala Val Lys Leu  
 140 145 150  
 Ser Thr Gly Cys Ser Gly Ile Leu Ile Ser Pro Gln His Val Leu  
 155 160 165  
 Thr Ala Ala His Cys Val His Asp Gly Lys Asp Tyr Val Lys Gly  
 170 175 180  
 Ser Lys Lys Leu Arg Val Gly Leu Leu Lys Met Arg Asn Lys Ser  
 185 190 195  
 Gly Gly Lys Lys Arg Arg Gly Ser Lys Arg Ser Arg Arg Glu Ala  
 200 205 210

Ser Gly Gly Asp Gln Arg Glu Gly Thr Arg Glu His Leu Gln Glu	215	220	225
Arg Ala Lys Gly Gly Arg Arg Arg Lys Lys Ser Gly Arg Gly Gln	230	235	240
Arg Ile Ala Glu Gly Arg Pro Ser Phe Gln Trp Thr Arg Val Lys	245	250	255
Asn Thr His Ile Pro Lys Gly Trp Ala Arg Gly Gly Met Gly Asp	260	265	270
Ala Thr Leu Asp Tyr Asp Tyr Ala Leu Leu Glu Leu Lys Arg Ala	275	280	285
His Lys Lys Lys Tyr Met Glu Leu Gly Ile Ser Pro Thr Ile Lys	290	295	300
Lys Met Pro Gly Gly Met Ile His Phe Ser Gly Phe Asp Asn Asp	305	310	315
Arg Ala Asp Gln Leu Val Tyr Arg Phe Cys Ser Val Ser Asp Glu	320	325	330
Ser Asn Asp Leu Leu Tyr Gln Tyr Cys Asp Ala Glu Ser Gly Ser	335	340	345
Thr Gly Ser Gly Val Tyr Leu Arg Leu Lys Asp Pro Asp Lys Lys	350	355	360
Asn Trp Lys Arg Lys Ile Ile Ala Val Tyr Ser Gly His Gln Trp	365	370	375
Val Asp Val His Gly Val Gln Lys Asp Tyr Asn Val Ala Val Arg	380	385	390
Ile Thr Pro Leu Lys Tyr Ala Gln Ile Cys Leu Trp Ile His Gly	395	400	405
Asn Asp Ala Asn Cys Ala Tyr Gly	410		

<210> 297

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 297

gcatctgcag gagagagcga aggg 24

<210> 298

<211> 24

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 298  
catcgttccc gtgaatccag aggc 24

<210> 299  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 299  
gaaggaggc cttcctttca gtggacccgg gtcaagaata cccac 45

<210> 300  
<211> 1869  
<212> DNA  
<213> Homo sapiens

<400> 300  
aatgtgagag gggctgatgg aagctgatag gcaggactgg agtgtagca 50  
ccagtactgg atgtgacagc aggcagagga gcacttagca gcttattcag 100  
tgtccgattc tgattccggc aaggatccaa gcatggaatg ctgccgtcgg 150  
gcaactcctg gcacactgct cctctttctg gctttcctgc tctgagttc 200  
caggaccgca cgctccgagg aggaccggga cggcctatgg gatgcctggg 250  
gcccattggag tgaatgctca cgcacctgcg ggggaggggc ctctactct 300  
ctgaggcgct gcctgagcag caagagctgt gaaggaagaa atatccgata 350  
cagaacatgc agtaatgtgg actgcccacc agaagcaggt gatttccgag 400  
ctcagcaatg ctcagctcat aatgatgtca agcaccatgg ccagttttat 450  
gaatggcttc ctgtgtctaa tgaccctgac aacccatgtt cactcaagtg 500  
ccaagccaaa ggaacaaccc tgggtgttga actagcacct aaggtcttag 550  
atggtacgcy ttgctataca gaatctttgg atatgtgcat cagtggttta 600  
tgccaaattg ttggctgcyg tcaccagctg ggaagcaccg tcaaggaaga 650  
taactgtggg gtctgcaacg gagatgggtc cacctgccgg ctgggtccgag 700  
ggcagtataa atcccagctc tccgcaacca aatcggtatga tactgtgggt 750  
gcacttccct atggaagtag acatattcgc cttgtcttaa aaggtcctga 800  
tcacttatat ctggaaacca aaaccctcca ggggactaaa ggtgaaaaca 850  
gtctcagctc cacaggaact ttccttgtgg acaattctag tgtggacttc 900

cagaaatttc cagacaaaga gatactgaga atggctggac cactcacagc 950  
 agatttcatt gtcaagattc gtaactcggg ctccgctgac agtacagtcc 1000  
 agttcatctt ctatcaaccc atcatccacc gatggaggga gacggatttc 1050  
 tttccttgct cagcaacctg tggaggaggt tatcagctga catcggctga 1100  
 gtgtacgat ctgaggagca accgtgtggt tgctgaccaa tactgtcact 1150  
 attaccaga gaacatcaaa cccaaaccca agcttcagga gtgcaacttg 1200  
 gatccttgtc cagccagtga cggatacaag cagatcatgc cttatgacct 1250  
 ctaccatccc cttcctcggg gggaggccac cccatggacc gcgtgctcct 1300  
 cctcgtgtgg ggggggcac cagagccggg cagtttcctg tgtggaggag 1350  
 gacatccagg ggcattgtac ttcagtggaa gaggggaaat gcatgtacac 1400  
 ccctaagatg cccatcgcgc agccctgcaa catttttgac tgccctaaat 1450  
 ggctggcaca ggagtggctt ccgtgcacag tgacatgtgg ccagggcctc 1500  
 agataccgtg tggtcctctg catcgaccat cgaggaatgc acacaggagg 1550  
 ctgtagccca aaaacaaagc cccacataaa agaggaatgc atcgtacca 1600  
 ctccctgcta taaacccaaa gagaaacttc cagtcgaggc caagttgcca 1650  
 tggttcaaac aagctcaaga gctagaagaa ggagctgctg tgtcagagga 1700  
 gccctcgtaa gttgtaaaag cacagactgt tctatatttg aaactgtttt 1750  
 gtttaaagaa agcagtgtct cactgggtgt agctttcatg gggtctgaac 1800  
 taagtgtaat catctacca aagctttttg gctctcaaat taaagattga 1850  
 ttagtttcaa aaaaaaaaaa 1869

<210> 301  
 <211> 525  
 <212> PRT  
 <213> Homo sapiens

<400> 301  
 Met Glu Cys Cys Arg Arg Ala Thr Pro Gly Thr Leu Leu Leu Phe  
 1 5 10 15  
 Leu Ala Phe Leu Leu Leu Ser Ser Arg Thr Ala Arg Ser Glu Glu  
 20 25 30  
 Asp Arg Asp Gly Leu Trp Asp Ala Trp Gly Pro Trp Ser Glu Cys  
 35 40 45  
 Ser Arg Thr Cys Gly Gly Gly Ala Ser Tyr Ser Leu Arg Arg Cys  
 50 55 60



Leu	Ser	Ser	Lys	Ser	Cys	Glu	Gly	Arg	Asn	Ile	Arg	Tyr	Arg	Thr	65	70	75
Cys	Ser	Asn	Val	Asp	Cys	Pro	Pro	Glu	Ala	Gly	Asp	Phe	Arg	Ala	80	85	90
Gln	Gln	Cys	Ser	Ala	His	Asn	Asp	Val	Lys	His	His	Gly	Gln	Phe	95	100	105
Tyr	Glu	Trp	Leu	Pro	Val	Ser	Asn	Asp	Pro	Asp	Asn	Pro	Cys	Ser	110	115	120
Leu	Lys	Cys	Gln	Ala	Lys	Gly	Thr	Thr	Leu	Val	Val	Glu	Leu	Ala	125	130	135
Pro	Lys	Val	Leu	Asp	Gly	Thr	Arg	Cys	Tyr	Thr	Glu	Ser	Leu	Asp	140	145	150
Met	Cys	Ile	Ser	Gly	Leu	Cys	Gln	Ile	Val	Gly	Cys	Asp	His	Gln	155	160	165
Leu	Gly	Ser	Thr	Val	Lys	Glu	Asp	Asn	Cys	Gly	Val	Cys	Asn	Gly	170	175	180
Asp	Gly	Ser	Thr	Cys	Arg	Leu	Val	Arg	Gly	Gln	Tyr	Lys	Ser	Gln	185	190	195
Leu	Ser	Ala	Thr	Lys	Ser	Asp	Asp	Thr	Val	Val	Ala	Leu	Pro	Tyr	200	205	210
Gly	Ser	Arg	His	Ile	Arg	Leu	Val	Leu	Lys	Gly	Pro	Asp	His	Leu	215	220	225
Tyr	Leu	Glu	Thr	Lys	Thr	Leu	Gln	Gly	Thr	Lys	Gly	Glu	Asn	Ser	230	235	240
Leu	Ser	Ser	Thr	Gly	Thr	Phe	Leu	Val	Asp	Asn	Ser	Ser	Val	Asp	245	250	255
Phe	Gln	Lys	Phe	Pro	Asp	Lys	Glu	Ile	Leu	Arg	Met	Ala	Gly	Pro	260	265	270
Leu	Thr	Ala	Asp	Phe	Ile	Val	Lys	Ile	Arg	Asn	Ser	Gly	Ser	Ala	275	280	285
Asp	Ser	Thr	Val	Gln	Phe	Ile	Phe	Tyr	Gln	Pro	Ile	Ile	His	Arg	290	295	300
Trp	Arg	Glu	Thr	Asp	Phe	Phe	Pro	Cys	Ser	Ala	Thr	Cys	Gly	Gly	305	310	315
Gly	Tyr	Gln	Leu	Thr	Ser	Ala	Glu	Cys	Tyr	Asp	Leu	Arg	Ser	Asn	320	325	330
Arg	Val	Val	Ala	Asp	Gln	Tyr	Cys	His	Tyr	Tyr	Pro	Glu	Asn	Ile	335	340	345
Lys	Pro	Lys	Pro	Lys	Leu	Gln	Glu	Cys	Asn	Leu	Asp	Pro	Cys	Pro			

350	355	360
Ala Ser Asp Gly Tyr Lys Gln Ile Met Pro Tyr Asp Leu Tyr His		
365	370	375
Pro Leu Pro Arg Trp Glu Ala Thr Pro Trp Thr Ala Cys Ser Ser		
380	385	390
Ser Cys Gly Gly Gly Ile Gln Ser Arg Ala Val Ser Cys Val Glu		
395	400	405
Glu Asp Ile Gln Gly His Val Thr Ser Val Glu Glu Trp Lys Cys		
410	415	420
Met Tyr Thr Pro Lys Met Pro Ile Ala Gln Pro Cys Asn Ile Phe		
425	430	435
Asp Cys Pro Lys Trp Leu Ala Gln Glu Trp Ser Pro Cys Thr Val		
440	445	450
Thr Cys Gly Gln Gly Leu Arg Tyr Arg Val Val Leu Cys Ile Asp		
455	460	465
His Arg Gly Met His Thr Gly Gly Cys Ser Pro Lys Thr Lys Pro		
470	475	480
His Ile Lys Glu Glu Cys Ile Val Pro Thr Pro Cys Tyr Lys Pro		
485	490	495
Lys Glu Lys Leu Pro Val Glu Ala Lys Leu Pro Trp Phe Lys Gln		
500	505	510
Ala Gln Glu Leu Glu Glu Gly Ala Ala Val Ser Glu Glu Pro Ser		
515	520	525

<210> 302  
 <211> 1533  
 <212> DNA  
 <213> Homo sapiens

<400> 302  
 cggacgcgtg ggcggcggct gcggaactcc cgtggagggg ccggtgggccc 50  
 ctcgggcctg acagatggca gtggccactg cggcggcagt actggccgct 100  
 ctggggcggg cgctgtggct ggcggcccg cggttcgtgg ggcccagggt 150  
 ccagcggctg cgcagaggcg gggaccccg cctcatgcac gggaagactg 200  
 tgctgatcac cggggcgaac agcggcctgg gccgcgccac ggccgcccag 250  
 ctactgcgcc tgggagcgcg ggtgatcatg ggctgccggg accgcgcgcg 300  
 cgccaggag gcggcgggtc agctccgccg cgagctccgc caggccgcgg 350  
 agtgcggccc agagcctggc gtcagcgggg tgggcgagct catagtccgg 400  
 gagctggacc tcgcctcgct gcgctcgggt gcgccttct gccaggaaat 450

gctccaggaa gaggctaggc tggatgtctt gatcaataac gcagggatct 500  
tccagtgtccc ttacatgaag actgaagatg ggtttgagat gcagttcgga 550  
gtgaaccatc tggggcactt tctactcacc aatcttctcc ttggactcct 600  
caaaagtcca gctcccagca ggattgtggt agtttcttcc aaactttata 650  
aatacggaga catcaatctt gatgacttga acagtgaaca aagctataat 700  
aaaagctttt gttatagccg gagcaaactg gctaacattc tttttaccag 750  
ggaactagcc cgccgcttag aaggcacaaa tgtcaccgtc aatgtgttgc 800  
atcctggtat tgtacggaca aatctgggga ggcacataca cattccactg 850  
ttggtcaaac cactcttcaa tttggtgtca tgggcttttt tcaaaaactcc 900  
agtagaaggt gccagactt ccatttatctt ggcctcttca cctgaggtag 950  
aaggagtgtc aggaagatac tttggggatt gtaaagagga agaactgttg 1000  
cccaaagcta tggatgaatc tgttgcaaga aaactctggg atatcagtga 1050  
agtgatgggt ggcctgctaa aataggaaca aggagtaaaa gagctgttta 1100  
taaaaactgca tatcagttat atctgtgatc aggaatggtg tggattgaga 1150  
acttgttact tgaagaaaaa gaattttgat attggaatag cctgctaaga 1200  
ggtacatgtg ggtatcttgg agttactgaa aaattatttt tgggataaga 1250  
gaatttcagc aaagatgttt taaatatata tagtaagtat aatgaataat 1300  
aagtacaatg aaaaatacaa ttatattgta aaattataac tgggcaagca 1350  
tggatgacat attaataatt gtcagaatta agtgactcaa agtgctatcg 1400  
agagggtttt caagtatctt tgagtttcat ggccaaagtg ttaactagtt 1450  
ttactacaat gtttggtggt tgtgtggaaa ttatctgcct ggtgtgtgca 1500  
cacaagtctt acttggaata aatttactgg tac 1533

<210> 303  
<211> 336  
<212> PRT  
<213> Homo sapiens

<400> 303  
Met Ala Val Ala Thr Ala Ala Ala Val Leu Ala Ala Leu Gly Gly  
1 5 10 15  
Ala Leu Trp Leu Ala Ala Arg Arg Phe Val Gly Pro Arg Val Gln  
20 25 30  
Arg Leu Arg Arg Gly Gly Asp Pro Gly Leu Met His Gly Lys Thr  
35 40 45

Val	Leu	Ile	Thr	Gly	Ala	Asn	Ser	Gly	Leu	Gly	Arg	Ala	Thr	Ala		50	55	60
Ala	Glu	Leu	Leu	Arg	Leu	Gly	Ala	Arg	Val	Ile	Met	Gly	Cys	Arg		65	70	75
Asp	Arg	Ala	Arg	Ala	Glu	Glu	Ala	Ala	Gly	Gln	Leu	Arg	Arg	Glu		80	85	90
Leu	Arg	Gln	Ala	Ala	Glu	Cys	Gly	Pro	Glu	Pro	Gly	Val	Ser	Gly		95	100	105
Val	Gly	Glu	Leu	Ile	Val	Arg	Glu	Leu	Asp	Leu	Ala	Ser	Leu	Arg		110	115	120
Ser	Val	Arg	Ala	Phe	Cys	Gln	Glu	Met	Leu	Gln	Glu	Glu	Pro	Arg		125	130	135
Leu	Asp	Val	Leu	Ile	Asn	Asn	Ala	Gly	Ile	Phe	Gln	Cys	Pro	Tyr		140	145	150
Met	Lys	Thr	Glu	Asp	Gly	Phe	Glu	Met	Gln	Phe	Gly	Val	Asn	His		155	160	165
Leu	Gly	His	Phe	Leu	Leu	Thr	Asn	Leu	Leu	Leu	Gly	Leu	Leu	Lys		170	175	180
Ser	Ser	Ala	Pro	Ser	Arg	Ile	Val	Val	Val	Ser	Ser	Lys	Leu	Tyr		185	190	195
Lys	Tyr	Gly	Asp	Ile	Asn	Phe	Asp	Asp	Leu	Asn	Ser	Glu	Gln	Ser		200	205	210
Tyr	Asn	Lys	Ser	Phe	Cys	Tyr	Ser	Arg	Ser	Lys	Leu	Ala	Asn	Ile		215	220	225
Leu	Phe	Thr	Arg	Glu	Leu	Ala	Arg	Arg	Leu	Glu	Gly	Thr	Asn	Val		230	235	240
Thr	Val	Asn	Val	Leu	His	Pro	Gly	Ile	Val	Arg	Thr	Asn	Leu	Gly		245	250	255
Arg	His	Ile	His	Ile	Pro	Leu	Leu	Val	Lys	Pro	Leu	Phe	Asn	Leu		260	265	270
Val	Ser	Trp	Ala	Phe	Phe	Lys	Thr	Pro	Val	Glu	Gly	Ala	Gln	Thr		275	280	285
Ser	Ile	Tyr	Leu	Ala	Ser	Ser	Pro	Glu	Val	Glu	Gly	Val	Ser	Gly		290	295	300
Arg	Tyr	Phe	Gly	Asp	Cys	Lys	Glu	Glu	Glu	Leu	Leu	Pro	Lys	Ala		305	310	315
Met	Asp	Glu	Ser	Val	Ala	Arg	Lys	Leu	Trp	Asp	Ile	Ser	Glu	Val		320	325	330
Met	Val	Gly	Leu	Leu	Lys													

<210> 304  
 <211> 521  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 20, 34, 62, 87, 221, 229  
 <223> unknown base

<400> 304  
 ggggattgta aagaggaagn actgtgccca aagntatgga tgaatctgtt 50  
 gcaagaaaat tntgggatat cagtgaagtg atggttngcc tgctaaaata 100  
 ggaacaagga gtaaaagagc tgtttataaa actgcatatc agttatatct 150  
 gtgatcagga atgggtgtgga ttgagaactt gttacttgaa gaaaaagaat 200  
 tttgatattg gaatagcctg ntaagaggna catgtgggta ttttggagtt 250  
 actgaaaaat tatttttggg ataagagaat ttcagcaaag atgtttttaa 300  
 tatatatagt aagtataatg aataataagt acaatgaaaa atacaattat 350  
 attgtaaaat tataactggg caagcatgga tgacatatta atatttgtca 400  
 gaattaagtg actcaaagtg ctatcgagag gtttttcaag tatctttgag 450  
 tttcatggcc aaagtgttaa ctagttttac tacaatgttt ggtgtttgtg 500  
 tggaaattat ctgcctggct t 521

<210> 305  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 305  
 ccaggaaatg ctccaggaag agcc 24

<210> 306  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 306  
 gcccatgaca ccaaattgaa gagtgg 26

<210> 307

<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 307  
aacgcaggga tcttccagtg cccttacatg aagactgaag atggg 45

<210> 308  
<211> 1523  
<212> DNA  
<213> Homo sapiens

<400> 308  
gagaggacga ggtgccgctg cctggagaat cctccgctgc cgtcggctcc 50  
cggagcccag ccttttcta acccaacca acctagcca gtcccagccg 100  
ccagcgctg tccctgtcac ggacccagc gttaccatgc atcctgccgt 150  
cttcctatcc ttacccgacc tcagatgctc ctttctgctc ctggtaactt 200  
gggtttttac tcctgtaaca actgaaataa caagtcttgc tacagagaat 250  
atagatgaaa ttttaacaa tgctgatgtt gcttttagtaa atttttatgc 300  
tgactgggtg cgtttcagtc agatgttgca tccaattttt gaggaagctt 350  
ccgatgtcat taaggaagaa tttccaaatg aaaatcaagt agtgtttgcc 400  
agagttgatt gtgatcagca ctctgacata gccagagat acaggataag 450  
caaatacca accctcaaat tgtttcgtaa tgggatgatg atgaagagag 500  
aatacagggg tcagcgatca gtgaaagcat tggcagatta catcaggcaa 550  
caaaaaagt accccattca agaaattcgg gacttagcag aaatcaccac 600  
tcttgatcgc agcaaaagaa atatcattgg atattttgag caaaaggact 650  
cggacaacta tagagttttt gaacgagtag cgaatatttt gcatgatgac 700  
tgtgcctttc tttctgcatt tggggatgtt tcaaaaccgg aaagatatag 750  
tggcgacaac ataatctaca aaccaccagg gcattctgct ccggatatgg 800  
tgtacttggg agctatgaca aattttgatg tgacttacaa ttggattcaa 850  
gataaatgtg ttcctcttgt ccgagaaata acatttgaaa atggagagga 900  
attgacagaa gaaggactgc cttttctcat actctttcac atgaaagaag 950  
atacagaaag tttagaaata ttccagaatg aagtagctcg gcaattaata 1000  
agtgaaaaag gtacaataaa ctttttacat gccgattgtg acaaatttag 1050

acatcctctt ctgcacatac agaaaactcc agcagattgt cctgtaatcg 1100  
ctattgacag ctttaggcat atgtatgtgt ttggagactt caaagatgta 1150  
ttaattcctg gaaaactcaa gcaattcgta ttgacttac attctggaaa 1200  
actgcacaga gaattccatc atggacctga cccaactgat acagccccag 1250  
gagagcaagc ccaagatgta gcaagcagtc cacctgagag ctccctccag 1300  
aaactagcac ccagtgaata taggtatact ctattgaggg atcgagatga 1350  
gcttttaaaaa cttgaaaaac agtttgtaag cctttcaaca gcagcatcaa 1400  
cctacgtggt ggaaatagta aacctatatt ttcataattc tatgtgtatt 1450  
tttattttga ataaacagaa agaaatttaa aaaaaaaaaa aaaaaaaaaa 1500  
aaaaaaaaaa aaaaaaaaaa aaa 1523

<210> 309  
<211> 406  
<212> PRT  
<213> Homo sapiens

<400> 309  
Met His Pro Ala Val Phe Leu Ser Leu Pro Asp Leu Arg Cys Ser  
1 5 10 15  
Leu Leu Leu Leu Val Thr Trp Val Phe Thr Pro Val Thr Thr Glu  
20 25 30  
Ile Thr Ser Leu Ala Thr Glu Asn Ile Asp Glu Ile Leu Asn Asn  
35 40 45  
Ala Asp Val Ala Leu Val Asn Phe Tyr Ala Asp Trp Cys Arg Phe  
50 55 60  
Ser Gln Met Leu His Pro Ile Phe Glu Glu Ala Ser Asp Val Ile  
65 70 75  
Lys Glu Glu Phe Pro Asn Glu Asn Gln Val Val Phe Ala Arg Val  
80 85 90  
Asp Cys Asp Gln His Ser Asp Ile Ala Gln Arg Tyr Arg Ile Ser  
95 100 105  
Lys Tyr Pro Thr Leu Lys Leu Phe Arg Asn Gly Met Met Met Lys  
110 115 120  
Arg Glu Tyr Arg Gly Gln Arg Ser Val Lys Ala Leu Ala Asp Tyr  
125 130 135  
Ile Arg Gln Gln Lys Ser Asp Pro Ile Gln Glu Ile Arg Asp Leu  
140 145 150  
Ala Glu Ile Thr Thr Leu Asp Arg Ser Lys Arg Asn Ile Ile Gly  
155 160 165

Tyr	Phe	Glu	Gln	Lys	Asp	Ser	Asp	Asn	Tyr	Arg	Val	Phe	Glu	Arg	170	175	180
Val	Ala	Asn	Ile	Leu	His	Asp	Asp	Cys	Ala	Phe	Leu	Ser	Ala	Phe	185	190	195
Gly	Asp	Val	Ser	Lys	Pro	Glu	Arg	Tyr	Ser	Gly	Asp	Asn	Ile	Ile	200	205	210
Tyr	Lys	Pro	Pro	Gly	His	Ser	Ala	Pro	Asp	Met	Val	Tyr	Leu	Gly	215	220	225
Ala	Met	Thr	Asn	Phe	Asp	Val	Thr	Tyr	Asn	Trp	Ile	Gln	Asp	Lys	230	235	240
Cys	Val	Pro	Leu	Val	Arg	Glu	Ile	Thr	Phe	Glu	Asn	Gly	Glu	Glu	245	250	255
Leu	Thr	Glu	Glu	Gly	Leu	Pro	Phe	Leu	Ile	Leu	Phe	His	Met	Lys	260	265	270
Glu	Asp	Thr	Glu	Ser	Leu	Glu	Ile	Phe	Gln	Asn	Glu	Val	Ala	Arg	275	280	285
Gln	Leu	Ile	Ser	Glu	Lys	Gly	Thr	Ile	Asn	Phe	Leu	His	Ala	Asp	290	295	300
Cys	Asp	Lys	Phe	Arg	His	Pro	Leu	Leu	His	Ile	Gln	Lys	Thr	Pro	305	310	315
Ala	Asp	Cys	Pro	Val	Ile	Ala	Ile	Asp	Ser	Phe	Arg	His	Met	Tyr	320	325	330
Val	Phe	Gly	Asp	Phe	Lys	Asp	Val	Leu	Ile	Pro	Gly	Lys	Leu	Lys	335	340	345
Gln	Phe	Val	Phe	Asp	Leu	His	Ser	Gly	Lys	Leu	His	Arg	Glu	Phe	350	355	360
His	His	Gly	Pro	Asp	Pro	Thr	Asp	Thr	Ala	Pro	Gly	Glu	Gln	Ala	365	370	375
Gln	Asp	Val	Ala	Ser	Ser	Pro	Pro	Glu	Ser	Ser	Phe	Gln	Lys	Leu	380	385	390
Ala	Pro	Ser	Glu	Tyr	Arg	Tyr	Thr	Leu	Leu	Arg	Asp	Arg	Asp	Glu	395	400	405

Leu

<210> 310  
 <211> 182  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure



<222> 36, 48  
<223> unknown base

<400> 310  
attaaggaag aatttccaaa tgaaaatcaa gtagtntttg ccagagtnga 50  
ttgtgatcag cactctgaca tagcccagag atacaggata agcaaatacc 100  
caaccctcaa attgtttcgt aatgggatga tgatgaagag agaatacagg 150  
ggtcagcgat cagtgaagc attggcagat ta 182

<210> 311  
<211> 598  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 38, 59, 140, 169, 174, 183, 282-283, 294-295, 319, 396  
<223> unknown base

<400> 311  
agaggcctct ctggaagttg tcccgggtgt tcgccgcngg agcccgggtc 50  
gagaggacna ggtgccgctg cctggagaat cctccgctgc cgtcggctcc 100  
cggagcccag ccctttccta acccaaccca acctagcccn gtcccagccg 150  
ccagcgctg tccctgtcnc ggancccagc gtnaccatgc atcctgccgt 200  
cttcctatcc ttacccgacc tcagatgctc ccttctgctc ctggtaactt 250  
gggtttttac tctgttaaca actgaaataa cnngtcttga tacnnagaat 300  
atagatgaaa ttttaaacna tgctgatgtg gcttttagtca atttttatgc 350  
tgactgggtg cgtttcagtc agatgtggca tccaattttt gaggangctt 400  
ccgatgtcat taaggaagaa tttccaaatg aaaatcaagt agtgtttgcc 450  
agagttgatt gtgatcagca ctctgacata gccagagat acaggataag 500  
caaataccca accctcaaat tgtttcgtaa tgggatgatg atgaagagag 550  
aatacagggg tcagcgatca gtgaaagcat tggcagatta catcaggc 598

<210> 312  
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<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 312  
tgagaggcct ctctggaagt tg 22

<210> 313  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 313  
gtcagcgatc agtgaaagc 19

<210> 314  
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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 314  
ccagaatgaa gtagctcggc 20

<210> 315  
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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 315  
ccgactcaaa atgcattgtc 20

<210> 316  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 316  
catttggcag gaattgtcc 19

<210> 317  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 317  
ggtgctatag gccaaagg 18

<210> 318  
<211> 24  
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 318

ctgtatctct gggctatgtc agag 24

<210> 319

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 319

ctacatataa tggcacatgt cagcc 25

<210> 320

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 320

cgctcttcta tccttaccgc acctcagatg ctcccttctg ctctg 46

<210> 321

<211> 1333

<212> DNA

<213> Homo sapiens

<400> 321

gcccacgcgt ccgatggcgt tcacgttcgc ggccttctgc tacatgctgg 50

cgctgctgct cactgccgcg ctcatcttct tcgccatttg gcacattata 100

gcatttgatg agctgaagac tgattacaag aatcctatag accagtgtaa 150

taccctgaat ccccttgtag tcccagagta cctcatccac gctttcttct 200

gtgtcatgtt tctttgtgca gcagagtggc ttacactggg tctcaatatg 250

cccctcttgg catatcatat ttggaggtat atgagtagac cagtgatgag 300

tggcccagga ctctatgacc ctacaacccat catgaatgca gatattctag 350

catattgtca gaaggaagga tgggtgcaaata tagcttttta tcttctagca 400

tttttttact acctatatgg catgatctat gttttgtgga gctcttagaa 450

caacacacag aagaattggc ccagttaagt gcatgcaaaa agccacaaaa 500

tgaagggatt ctatccagca agatcctgtc caagagtagc ctgtggaatc 550

tgatcagtta ctttaaaaaa tgactcctta ttttttaa at gtttccacat 600  
 ttttgcttgt ggaaagactg ttttcatatg ttatactcag ataaagattt 650  
 taaatggtat tacgtataaa ttaatatata atgattacct ctggtgttga 700  
 caggtttgaa cttgcacttc ttaaggaaca gccataatcc tctgaatgat 750  
 gcattaatta ctgactgtcc tagtacattg gaagcttttg tttataggaa 800  
 cttgtagggc tcatttttgg ttcattgaaa cagtatctaa ttataaatta 850  
 gctgtagata tcagggtgctt ctgatgaagt gaaaatgtat atctgactag 900  
 tgggaaactt catgggtttc ctcactgtgc atgtcgatga ttatatatgg 950  
 atacatttac aaaaataaaa agcgggaatt ttcccttcgc ttgaatatta 1000  
 tccctgtata ttgcatgaat gagagatttc ccatatttcc atcagagtaa 1050  
 taaatatact tgctttaatt ctttaagcata agtaaactatg atataaaaaat 1100  
 atatgctgaa ttacttgtga agaatgcatt taaagctatt ttaaagtgtg 1150  
 ttttatttgt aagacattac ttattaagaa attgggttatt atgcttactg 1200  
 ttctaactcg gtggtaaagg tattcttaag aatttgcagg tactacagat 1250  
 tttcaaaact gaatgagaga aaattgtata accatcctgc tgttccttta 1300  
 gtgcaataca ataaaactct gaaattaaga ctc 1333

<210> 322  
 <211> 144  
 <212> PRT  
 <213> Homo sapiens

<400> 322  
 Met Ala Phe Thr Phe Ala Ala Phe Cys Tyr Met Leu Ala Leu Leu  
 1 5 10 15  
 Leu Thr Ala Ala Leu Ile Phe Phe Ala Ile Trp His Ile Ile Ala  
 20 25 30  
 Phe Asp Glu Leu Lys Thr Asp Tyr Lys Asn Pro Ile Asp Gln Cys  
 35 40 45  
 Asn Thr Leu Asn Pro Leu Val Leu Pro Glu Tyr Leu Ile His Ala  
 50 55 60  
 Phe Phe Cys Val Met Phe Leu Cys Ala Ala Glu Trp Leu Thr Leu  
 65 70 75  
 Gly Leu Asn Met Pro Leu Leu Ala Tyr His Ile Trp Arg Tyr Met  
 80 85 90  
 Ser Arg Pro Val Met Ser Gly Pro Gly Leu Tyr Asp Pro Thr Thr  
 95 100 105

Ile Met Asn Ala Asp Ile Leu Ala Tyr Cys Gln Lys Glu Gly Trp  
110 115 120

Cys Lys Leu Ala Phe Tyr Leu Leu Ala Phe Phe Tyr Tyr Leu Tyr  
125 130 135

Gly Met Ile Tyr Val Leu Val Ser Ser  
140

<210> 323

<211> 477

<212> DNA

<213> Homo sapiens

<400> 323

attatagcat ttgatgagct gaagactgat tacaagatcc tatagaccag 50  
tgtaataccc tgaatcccct tgtactccca gactacctca tccacgcttt 100  
cttctgtgtc atgtttcttt gtgcagcaga gtgggttaca ctgggtctca 150  
atatgcccct cttggcatat catatttga ggtatatgag tagaccagt 200  
atgagtggcc caggactcta tgaccctaca accatcatga atgcagatat 250  
tctagcatat tgtcagaagg aaggatgggtg caaattagct ttttatcttc 300  
tagcattttt ttactaccta tatggcatga tctatgtttt ggtgagctct 350  
tagaacaaca cacagaagaa ttgggtccagt taagtgcattg caaaaagcca 400  
ccaaatgaag ggattctatc cagcaagatc ctgtccaaga gtagcctgtg 450  
gaatctgatc agttacttta aaaaatg 477

<210> 324

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 324

tgtaaaacga cggccagtta aatagacctg caattattaa tct 43

<210> 325

<211> 41

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 325

caggaaacag ctatgaccac ctgcacacct gcaaattccat t 41

<210> 326

<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 326  
gtgcagcaga gtggcttaca 20

<210> 327  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 327  
actggaccaa ttcttctgtg 20

<210> 328  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 328  
gatattctag catattgtca gaaggaagga tgggtgcaaat tagct 45

<210> 329  
<211> 1174  
<212> DNA  
<213> Homo sapiens

<400> 329  
cggacgcgtg ggggaaaccc ttccgagaaa acagcaacaa gctgagctgc 50  
tgtgacagag gggaaacaaga tggcggcgcc gaaggggagc ctctgggtga 100  
ggacccaact ggggctcccc cgcgtgctgc tgctgaccat ggccttggcc 150  
ggaggttcgg ggaccgcttc ggctgaagca tttgactcgg tcttgggtga 200  
tacggcgtct tgccaccggg cctgtcagtt gacctacccc ttgcacacct 250  
accctaagga agaggagttg tacgcatgtc agagaggttg caggctgttt 300  
tcaatttgtc agtttgtgga tgatggaatt gacttaaadc gaactaaatt 350  
ggaatgtgaa tctgcatgta cagaagcata ttcccaatct gatgagcaat 400  
atgcttgcca tcttggttgc cagaatcagc tgccattcgc tgaactgaga 450  
caagaacaac ttatgtccct gatgcaaaaa atgcacctac tctttcctct 500

aactctggtg aggtcattct ggagtgacat gatggactcc gcacagagct 550  
tcataacctc ttcattggact ttttatcttc aagccgatga cggaaaaata 600  
gttatattcc agtctaagcc agaaatccag tacgcaccac atttggagca 650  
ggagcctaca aatttgagag aatcatctct aagcaaaatg tcctatctgc 700  
aaatgagaaa ttcacaagcg cacaggaatt ttcttgaaga tggagaaagt 750  
gatggctttt taagatgcct ctctcttaac tctgggtgga ttttaactac 800  
aactcttgtc ctctcgggtga tggatttgc ttggatttgc tgtgcaactg 850  
ttgctacagc tgtggagcag tatgttcctt ctgagaagct gagtatctat 900  
ggtgacttgg agtttatgaa tgaacaaaag ctaaacagat atccagcttc 950  
ttctcttggtg gttgttagat ctaaaactga agatcatgaa gaagcagggc 1000  
ctctacctac aaaagtgaat cttgctcatt ctgaaattta agcatttttc 1050  
ttttaaaaga caagtgtaat agacatctaa aattccactc ctcatagagc 1100  
ttttaaaatg gtttcattgg atataggcct taagaaatca ctataaaatg 1150  
caaataaagt tactcaaate tgtg 1174

<210> 330  
<211> 323  
<212> PRT  
<213> Homo sapiens

<400> 330  
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Leu Pro Pro Leu Leu Leu Leu Thr Met Ala Leu Ala Gly Gly Ser  
20 25 30  
Gly Thr Ala Ser Ala Glu Ala Phe Asp Ser Val Leu Gly Asp Thr  
35 40 45  
Ala Ser Cys His Arg Ala Cys Gln Leu Thr Tyr Pro Leu His Thr  
50 55 60  
Tyr Pro Lys Glu Glu Glu Leu Tyr Ala Cys Gln Arg Gly Cys Arg  
65 70 75  
Leu Phe Ser Ile Cys Gln Phe Val Asp Asp Gly Ile Asp Leu Asn  
80 85 90  
Arg Thr Lys Leu Glu Cys Glu Ser Ala Cys Thr Glu Ala Tyr Ser  
95 100 105  
Gln Ser Asp Glu Gln Tyr Ala Cys His Leu Gly Cys Gln Asn Gln  
110 115 120

Leu	Pro	Phe	Ala	Glu	Leu	Arg	Gln	Glu	Gln	Leu	Met	Ser	Leu	Met	125	130	135
Pro	Lys	Met	His	Leu	Leu	Phe	Pro	Leu	Thr	Leu	Val	Arg	Ser	Phe	140	145	150
Trp	Ser	Asp	Met	Met	Asp	Ser	Ala	Gln	Ser	Phe	Ile	Thr	Ser	Ser	155	160	165
Trp	Thr	Phe	Tyr	Leu	Gln	Ala	Asp	Asp	Gly	Lys	Ile	Val	Ile	Phe	170	175	180
Gln	Ser	Lys	Pro	Glu	Ile	Gln	Tyr	Ala	Pro	His	Leu	Glu	Gln	Glu	185	190	195
Pro	Thr	Asn	Leu	Arg	Glu	Ser	Ser	Leu	Ser	Lys	Met	Ser	Tyr	Leu	200	205	210
Gln	Met	Arg	Asn	Ser	Gln	Ala	His	Arg	Asn	Phe	Leu	Glu	Asp	Gly	215	220	225
Glu	Ser	Asp	Gly	Phe	Leu	Arg	Cys	Leu	Ser	Leu	Asn	Ser	Gly	Trp	230	235	240
Ile	Leu	Thr	Thr	Thr	Leu	Val	Leu	Ser	Val	Met	Val	Leu	Leu	Trp	245	250	255
Ile	Cys	Cys	Ala	Thr	Val	Ala	Thr	Ala	Val	Glu	Gln	Tyr	Val	Pro	260	265	270
Ser	Glu	Lys	Leu	Ser	Ile	Tyr	Gly	Asp	Leu	Glu	Phe	Met	Asn	Glu	275	280	285
Gln	Lys	Leu	Asn	Arg	Tyr	Pro	Ala	Ser	Ser	Leu	Val	Val	Val	Arg	290	295	300
Ser	Lys	Thr	Glu	Asp	His	Glu	Glu	Ala	Gly	Pro	Leu	Pro	Thr	Lys	305	310	315
Val	Asn	Leu	Ala	His	Ser	Glu	Ile								320		

<210> 331

<211> 350

<212> DNA

<213> Homo sapiens

<400> 331

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ttgggtgata cggcgtcttg ccaccgggcc tgtcagttga cctaccctt 50
gcacacctac cctaaggaag aggagttgta cgcattgtcag agaggttgca 100
ggctgttttc aatttgtcag tttgtggatg atggaattga cttaaattcga 150
actaaattgg aatgtgaatc tgcattgtaca gaagcatatt cccaattctga 200
tgagcaatat gcttgccatc ttggttgcca gaatcagctg ccattcgctg 250

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aactgagaca agaacaactt atgtccctga tgccaaaaat gcacctactc 300  
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<210> 332  
<211> 562  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 47  
<223> unknown base

<400> 332  
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cgaagggagc ctttggtgga ggacccaact ggggctcccg ccgctgctgc 150  
tgctgaccat ggccttggcc ggaggttcgg ggaccgcttc ggctgaagca 200  
tttgactcgg tcttggtgga tacggcgtct tgccaccggg cctgtcagtt 250  
gacctacccc ttgcacacct accctaagga agaggagttg tacgcatgtc 300  
agagaggttg caggctgttt tcaatttgtc agtttgtgga tgatggaatt 350  
gacttaaadc gaactaaatt ggaatgtgaa tctgcatgta cagaagcata 400  
ttccaatat gatgagcaat atgcttgcca tcttggttgc cagaatcagc 450  
tgccattcgc tgaactgaga caagaacaac ttatgtccct gatgccaaaa 500  
atgcacctac tctttctct aactctggtg aggtcattct ggagtgacat 550  
gatggactcc gc 562

<210> 333  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 333  
acaagctgag ctgctgtgac ag 22

<210> 334  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 334  
tgattctggc aaccaagatg gc 22

<210> 335  
<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 335  
atggccttgg ccggagggttc ggggaccgct tcggctgaag 40

<210> 336  
<211> 1885  
<212> DNA  
<213> Homo sapiens

<400> 336  
gcgaggtggc gatcgctgag aggcaggagg gccgaggcgg gcctgggagg 50  
cggccccggag gtggggcgcc gctggggccg gcccgcacgg gcttcatctg 100  
agggcgcacg gcccgcgacc gagcgtgcgg actggcctcc caagcgtggg 150  
gcgacaagct gccggagctg caatggggccg cggctgggga ttcttgtttg 200  
gcctcctggg cgccgtgtgg ctgctcagct cggggccacgg agaggagcag 250  
cccccgaga cagcggcaca gaggtgcttc tgccaggtta gtggttactt 300  
ggatgattgt acctgtgatg ttgaaacat tgatagattt aataactaca 350  
ggcttttccc aagactacaa aaacttcttg aaagtgacta ctttaggtat 400  
tacaaggtaa acctgaagag gccgtgtcct ttctggaatg acatcagcca 450  
gtgtggaaga agggactgtg ctgtcaaacc atgtcaatct gatgaagtgc 500  
ctgatggaat taaatctgcg agctacaagt attctgaaga agccaataat 550  
ctcattgaag aatgtgaaca agctgaacga cttggagcag tggatgaatc 600  
tctgagttag gaaacacaga aggctgttct tcagtggacc aagcatgatg 650  
attcttcaga taacttctgt gaagctgatg acattcagtc ccctgaagct 700  
gaatatgtag atttgcttct taatcctgag cgctacactg gttacaaggg 750  
accagatgct tggaaaatat ggaatgtcat ctacgaagaa aactgtttta 800  
agccacagac aattaaaga ccttttaaata ctttggcttc tgggtcaaggg 850  
acaagtgaag agaacacttt ttacagttgg ctagaaggtc tctgtgtaga 900  
aaaaagagca ttctacagac ttatatctgg cctacatgca agcattaatg 950

tgcatttgag tgcaagatat cttttacaag agacctgggt agaaaagaaa 1000  
 tggggacaca acattacaga atttcaacag cgatttgatg gaattttgac 1050  
 tgaaggagaa ggtccaagaa ggcttaagaa cttgtatttt ctctacttaa 1100  
 tagaactaag ggctttatcc aaagtgttac cattcttcga gcgcccagat 1150  
 tttcaactct ttactggaaa taaaattcag gatgaggaaa acaaaatggt 1200  
 acttctggaa atacttcag aaatcaagtc atttcctttg cattttgatg 1250  
 agaattcatt ttttgctggg gataaaaaag aagcacacaa actaaaggag 1300  
 gactttcgac tgcattttag aaatatttca agaattatgg attgtgttgg 1350  
 ttgttttaaa tgtcgtctgt ggggaaagct tcagactcag ggtttgggca 1400  
 ctgctctgaa gatcttattt tctgagaaat tgatagcaaa tatgccagaa 1450  
 agtggaccta gttatgaatt ccatctaacc agacaagaaa tagtatcatt 1500  
 attcaacgca tttggaagaa tttctacaag tgtgaaagaa ttagaaaact 1550  
 tcaggaactt gttacagaat attcattaaa gaaaacaagc tgatatgtgc 1600  
 ctgtttctgg acaatggagg cgaaagagtg gaatttcatt caaaggcata 1650  
 atagcaatga cagtcttaag ccaaacattt tatataaagt tgcttttgta 1700  
 aaggagaatt atattgtttt aagtaaacac atttttaaaa attgtgttaa 1750  
 gtctatgtat aatactactg tgagtaaaag taatacttta ataatgtggg 1800  
 acaaatttta aagttaata ttgaataaaa ggaggattat caaattaaaa 1850  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 1885

<210> 337  
 <211> 468  
 <212> PRT  
 <213> Homo sapiens

<400> 337  
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 Trp Leu Leu Ser Ser Gly His Gly Glu Glu Gln Pro Pro Glu Thr  
 20 25 30  
 Ala Ala Gln Arg Cys Phe Cys Gln Val Ser Gly Tyr Leu Asp Asp  
 35 40 45  
 Cys Thr Cys Asp Val Glu Thr Ile Asp Arg Phe Asn Asn Tyr Arg  
 50 55 60  
 Leu Phe Pro Arg Leu Gln Lys Leu Leu Glu Ser Asp Tyr Phe Arg  
 65 70 75

Tyr	Tyr	Lys	Val	Asn	Leu	Lys	Arg	Pro	Cys	Pro	Phe	Trp	Asn	Asp	
				80					85					90	
Ile	Ser	Gln	Cys	Gly	Arg	Arg	Asp	Cys	Ala	Val	Lys	Pro	Cys	Gln	
				95					100					105	
Ser	Asp	Glu	Val	Pro	Asp	Gly	Ile	Lys	Ser	Ala	Ser	Tyr	Lys	Tyr	
				110					115					120	
Ser	Glu	Glu	Ala	Asn	Asn	Leu	Ile	Glu	Glu	Cys	Glu	Gln	Ala	Glu	
				125					130					135	
Arg	Leu	Gly	Ala	Val	Asp	Glu	Ser	Leu	Ser	Glu	Glu	Thr	Gln	Lys	
				140					145					150	
Ala	Val	Leu	Gln	Trp	Thr	Lys	His	Asp	Asp	Ser	Ser	Asp	Asn	Phe	
				155					160					165	
Cys	Glu	Ala	Asp	Asp	Ile	Gln	Ser	Pro	Glu	Ala	Glu	Tyr	Val	Asp	
				170					175					180	
Leu	Leu	Leu	Asn	Pro	Glu	Arg	Tyr	Thr	Gly	Tyr	Lys	Gly	Pro	Asp	
				185					190					195	
Ala	Trp	Lys	Ile	Trp	Asn	Val	Ile	Tyr	Glu	Glu	Asn	Cys	Phe	Lys	
				200					205					210	
Pro	Gln	Thr	Ile	Lys	Arg	Pro	Leu	Asn	Pro	Leu	Ala	Ser	Gly	Gln	
				215					220					225	
Gly	Thr	Ser	Glu	Glu	Asn	Thr	Phe	Tyr	Ser	Trp	Leu	Glu	Gly	Leu	
				230					235					240	
Cys	Val	Glu	Lys	Arg	Ala	Phe	Tyr	Arg	Leu	Ile	Ser	Gly	Leu	His	
				245					250					255	
Ala	Ser	Ile	Asn	Val	His	Leu	Ser	Ala	Arg	Tyr	Leu	Leu	Gln	Glu	
				260					265					270	
Thr	Trp	Leu	Glu	Lys	Lys	Trp	Gly	His	Asn	Ile	Thr	Glu	Phe	Gln	
				275					280					285	
Gln	Arg	Phe	Asp	Gly	Ile	Leu	Thr	Glu	Gly	Glu	Gly	Pro	Arg	Arg	
				290					295					300	
Leu	Lys	Asn	Leu	Tyr	Phe	Leu	Tyr	Leu	Ile	Glu	Leu	Arg	Ala	Leu	
				305					310					315	
Ser	Lys	Val	Leu	Pro	Phe	Phe	Glu	Arg	Pro	Asp	Phe	Gln	Leu	Phe	
				320					325					330	
Thr	Gly	Asn	Lys	Ile	Gln	Asp	Glu	Glu	Asn	Lys	Met	Leu	Leu	Leu	
				335					340					345	
Glu	Ile	Leu	His	Glu	Ile	Lys	Ser	Phe	Pro	Leu	His	Phe	Asp	Glu	
				350					355					360	
Asn	Ser	Phe	Phe	Ala	Gly	Asp	Lys	Lys	Glu	Ala	His	Lys	Leu	Lys	

365	370	375
Glu Asp Phe Arg Leu His Phe Arg Asn Ile Ser Arg Ile Met Asp		
380	385	390
Cys Val Gly Cys Phe Lys Cys Arg Leu Trp Gly Lys Leu Gln Thr		
395	400	405
Gln Gly Leu Gly Thr Ala Leu Lys Ile Leu Phe Ser Glu Lys Leu		
410	415	420
Ile Ala Asn Met Pro Glu Ser Gly Pro Ser Tyr Glu Phe His Leu		
425	430	435
Thr Arg Gln Glu Ile Val Ser Leu Phe Asn Ala Phe Gly Arg Ile		
440	445	450
Ser Thr Ser Val Lys Glu Leu Glu Asn Phe Arg Asn Leu Leu Gln		
455	460	465
Asn Ile His		

<210> 338  
 <211> 507  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 101, 263, 376, 397, 426  
 <223> unknown base

<400> 338  
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 ttaaaagacc tttaaactct ttggcttctg gtcaaggac aagtgaagag 100  
 nacacttttt acagttggct agaaggtctc tgtgtagaaa aaagagcatt 150  
 ctacagactt atatctggcc tacatgcaag cattaatgtg catttgagtg 200  
 caagatatct tttaacaagag acctgggttag aaaagaaatg gggacacaac 250  
 attacagaat ttnaacagcg atttgatgga attttgactg aaggagaagg 300  
 tccaagaagg cttaagaact tgtattttct ctacttaata gaactaaggg 350  
 ctttatccaa agtgttacca ttcttngagc gccagattt tcaactnttt 400  
 actggaaata aaattcagga tgaggnaaac aaaatgttac ttttgaaat 450  
 acttcatgaa atcaagtcac ttctttgca ttttgatgag aattcatttt 500  
 tttgctg 507

<210> 339  
 <211> 20

<212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 339  
 aagctgccgg agctgcaatg 20  
  
 <210> 340  
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 agagattcat ccaactgctcc aagtcg 26  
  
 <210> 343  
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 tgtccagaaa caggcacata tcagc 25  
  
 <210> 344  
 <211> 50  
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 <213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 344

agacagcggc acagaggtgc ttctgccagg ttagtgggta cttggatgat 50

<210> 345

<211> 1486

<212> DNA

<213> Homo sapiens

<400> 345

cggacgcgtg ggcggacgcg tgggcggacg cgtgggttgg gagggggcag 50

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ggactttctca tactggacag aaaccgatca ggcatggaac tccccttcgt 150

cactcacctg ttcttgcccc tgggtgttct gacaggtctc tgctccccct 200

ttaacctgga tgaacatcac ccacgcctat tcccagggcc accagaagct 250

gaatttggat acagtgtctt acaacatgtt ggggggtggac agcgatggat 300

gctggtgggc gccccctggg atgggccttc aggcgaccgg aggggggacg 350

tttatcgctg ccctgtaggg gggggccaca atgccccatg tgccaagggc 400

cacttaggtg actaccaact gggaaattca tctcatcctg ctgtgaatat 450

gcacctgggg atgtctctgt tagagacaga tggatgatgg ggattcatgg 500

tgagctaagg agaggggtgg ggcagtgtct ctgaaggtcc ataaaagaaa 550

aaagagaagt gtggttaagg aaaatggtct gtgtggaggg gtcaaggagt 600

taaaaaccct agaaagcaaa aggtaggtaa tgtcaggag tagtcttcat 650

gcctccttca actgggagca tgttctgagg gtgccctccc aagcctggga 700

gtaactattt ccccatccc caggcctgtg cccctctctg gtctcgtgct 750

tgtggcagct ctgtcttcag ttctgggata tgtgcccgtg tggatgcttc 800

attccagcct caggggaagcc tggcacccac tgcccaacgt gagccagagg 850

aaggctgagt acttgggttc cagaaggaga tactgggtgg gaaaaagatg 900

gggcaaagcg gtatgatgcc tggcaaaggg cctgcatggc tatcctcatt 950

gctacctaata gtgcttgcaa aagctccatg tttcctaaca gattcagact 1000

cctggccagg tgtggtggcc cacacctgta attctagcac tttgggaggg 1050

caagggtgggc agatcacttg aggtcaggag ttcaagacca gcctggccaa 1100

catggtgaaa ctccatctct actaaaaaaaa aaaaaataca aaaattagct 1150

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 ggagactctc acttcaaccc aggagggtgga gggtgcggtg agccaagatt 1250  
 gtgcctctgc actctagcgt gggtgacaga gtaagcgaga ctccatctca 1300  
 aaaataataa taataataat tcagactcct tatcaggagt ccatgatctg 1350  
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 agaaagaccc catctctaaa taaatgtttt aaaaat 1486

<210> 346

<211> 124

<212> PRT

<213> Homo sapiens

<400> 346

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Leu	Thr	Gly	Leu	Cys	Ser	Pro	Phe	Asn	Leu	Asp	Glu	His	His	Pro
			20						25					30
Arg	Leu	Phe	Pro	Gly	Pro	Pro	Glu	Ala	Glu	Phe	Gly	Tyr	Ser	Val
			35						40					45
Leu	Gln	His	Val	Gly	Gly	Gly	Gln	Arg	Trp	Met	Leu	Val	Gly	Ala
			50						55					60
Pro	Trp	Asp	Gly	Pro	Ser	Gly	Asp	Arg	Arg	Gly	Asp	Val	Tyr	Arg
			65						70					75
Cys	Pro	Val	Gly	Gly	Ala	His	Asn	Ala	Pro	Cys	Ala	Lys	Gly	His
			80						85					90
Leu	Gly	Asp	Tyr	Gln	Leu	Gly	Asn	Ser	Ser	His	Pro	Ala	Val	Asn
			95						100					105
Met	His	Leu	Gly	Met	Ser	Leu	Leu	Glu	Thr	Asp	Gly	Asp	Gly	Gly
			110						115					120
Phe	Met	Val	Ser											

<210> 347

<211> 509

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 22

<223> unknown base

<400> 347



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 ggagagggac agaggccaga ggacttctca tactggacag aaaccgatca 150  
 ggcatggaac tccccctcgt cactcacctg ttcttgcccc tgggtgttct 200  
 gacaggtctc tgctccccct ttaacctgga tgaacatcac ccacgcctat 250  
 tcccagggcc accagaagct gaatttggat acagtgtctt acaacatggt 300  
 gggggtggac agcgatggat gctgggtggc gccccctggg atgggccttc 350  
 aggcgaccgg aggggggacg tttatcgctg ccctgtaggg ggggcccaca 400  
 atgccccatg tgccaagggc cacttaggtg actaccaact gggaaattca 450  
 tctcatcctg ctgtgaatat gcacctgggg atgtctctgt tagagacaga 500  
 tggtgatgg 509

<210> 348  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 348  
 agggacagag gccagaggac ttc 23

<210> 349  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 349  
 caggtgcata ttcacagcag gatg 24

<210> 350  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 350  
 ggaactcccc ttctgtaact acctgttctt gccccctgggtg ttct 45

<210> 351  
 <211> 2056  
 <212> DNA

<213> Homo sapiens

<400> 351

aaagttacat tttctctgga actctcctag gccactccct gctgatgcaa 50  
catctggggt tgggcagaaa ggaggggtgct tcggagcccg ccctttctga 100  
gcttcctggg ccggctctag aacaattcag gcttcgctgc gactcagacc 150  
tcagctccaa catatgcatt ctgaagaaag atggctgaga tggacagaat 200  
gctttatttt ggaaagaaac aatgttctag gtcaaactga gtctaccaa 250  
tgcagacttt cacaatgggt ctagaagaaa tctggacaag tcttttcatg 300  
tggtttttct acgcattgat tccatgtttg ctcacagatg aagtggccat 350  
tctgcctgcc cctcagaacc tctctgtact ctcaaccaac atgaagcatc 400  
tcttgatgtg gagcccagtg atcgcgctg gagaaacagt gtactattct 450  
gtcgaatacc agggggagta cgagagcctg tacacgagcc acatctggat 500  
ccccagcagc tgggtgctac tcaactgaagg tcctgagtgt gatgtcactg 550  
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ggctcacaga cctcagcctg gagcatcctg aagcatccct ttaatagaaa 650  
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caggtgaagc cgagaacctg gtctgcatga catggaaacc atgaggggac 1250  
aagttgtgtt tctgttttcc gccacggaca agggatgaga gaagtaggaa 1300  
gagcctgttg tctacaagtc tagaagcaac catcagaggc agggtggttt 1350  
gtctaacaga aactgactg aggccttaggg gatgtgacct ctagactggg 1400

ggctgccact tgctggctga gcaaccctgg gaaaagtgac ttcacccctt 1450  
 cggtcctaag ttttctcatc tgtaatgggg gaattaccta cacacctgct 1500  
 aaacacacac acacagagtc tctctctata tatacacacg tacacataaa 1550  
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 agacagcagg tgaaatgtat gtgtgcaatg cgacgagaat gcagaagtca 1950  
 gtaacatgtg catgtttgtt gtgtcccttt tttctgttgg taaagtacag 2000  
 aattcagcaa ataaaaaggg ccaccctggc caaaagcggg aaaaaaaaaa 2050  
 aaaaaa 2056

<210> 352  
 <211> 311  
 <212> PRT  
 <213> Homo sapiens

<400> 352  
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 Phe Met Trp Phe Phe Tyr Ala Leu Ile Pro Cys Leu Leu Thr Asp  
 20 25 30  
 Glu Val Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser  
 35 40 45  
 Thr Asn Met Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro  
 50 55 60  
 Gly Glu Thr Val Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu  
 65 70 75  
 Ser Leu Tyr Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys Ser  
 80 85 90  
 Leu Thr Glu Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala  
 95 100 105  
 Thr Val Pro Tyr Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln  
 110 115 120

Thr	Ser	Ala	Trp	Ser	Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser	125	130	135
Thr	Ile	Leu	Thr	Arg	Pro	Gly	Met	Glu	Ile	Thr	Lys	Asp	Gly	Phe	140	145	150
His	Leu	Val	Ile	Glu	Leu	Glu	Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe	155	160	165
Leu	Val	Ala	Tyr	Trp	Arg	Arg	Glu	Pro	Gly	Ala	Glu	Glu	His	Val	170	175	180
Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro	Val	His	Leu	Glu	Thr	Met	185	190	195
Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala	Gln	Thr	Phe	Val	Lys	200	205	210
Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr	Glu	Cys	Val	Glu	215	220	225
Val	Gln	Gly	Glu	Ala	Ile	Pro	Leu	Val	Leu	Ala	Leu	Phe	Ala	Phe	230	235	240
Val	Gly	Phe	Met	Leu	Ile	Leu	Val	Val	Val	Pro	Leu	Phe	Val	Trp	245	250	255
Lys	Met	Gly	Arg	Leu	Leu	Gln	Tyr	Ser	Cys	Cys	Pro	Val	Val	Val	260	265	270
Leu	Pro	Asp	Thr	Leu	Lys	Ile	Thr	Asn	Ser	Pro	Gln	Lys	Leu	Ile	275	280	285
Ser	Cys	Arg	Arg	Glu	Glu	Val	Asp	Ala	Cys	Ala	Thr	Ala	Val	Met	290	295	300
Ser	Pro	Glu	Glu	Leu	Leu	Arg	Ala	Trp	Ile	Ser					305	310	

<210> 353

<211> 864

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 654, 711, 748, 827

<223> unknown base

<400> 353

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tagacctcag ctccaacata tgcattctga agaaagatgg ctgagatgac 150

agaatgcttt attttggaaa gaaacaatgt tctaggtcaa actgagtcta 200

ccaaatgcag actttcacaa tggttctaga agaaatctgg acaagtcttt 250  
 tcatgtgggt tttctacgca ttgattccat gtttgctcac agatgaagtg 300  
 gccattctgc ctgcccctca gaacctctct gtactctcaa ccaacatgaa 350  
 gcatctcttg atgtggagcc cagtgatcgc gcctggagaa acagtgtact 400  
 attctgtcga ataccagggg gagtacgaga gcctgtacac gagccacatc 450  
 tggatcccca gcagctgggt ctctactcact gaaggctctg agtgtgatgt 500  
 cactgatgac atcacggcca ctgtgccata caacctttgt gtcagggcca 550  
 cattgggctc acagacctca gcctggagca tcctgaagca tccctttaat 600  
 agaaactcaa ccataccttac ccgacctggg atggagatca ccaaagatgg 650  
 cttncacctg gttattgagc tggaggacct ggggccccag tttgagttcc 700  
 ttgtggccta ntggaggagg ggcgaacccc ttgcggcgca aggggttngc 750  
 gaacccttg cgcccgctgg ggtatctctc gagaaaagag aggcccaata 800  
 tgaccacat actcaatatg gacgaantgc tattgtccac ctgtttgagt 850  
 ggcgctgggt tgat 864

<210> 354

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 354

aggcttcgct gcgactagac ctc 23

<210> 355

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 355

ccaggtcggg taaggatggt tgag 24

<210> 356

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 356  
tttctacgca ttgattccat gtttgctcac agatgaagtg gccattctgc 50

<210> 357  
<211> 1670  
<212> DNA  
<213> Homo sapiens

<400> 357  
cccacgcgtc cgcccacgcg tccgagggac aagagagaag agagactgaa 50  
acagggagaa gaggcaggag aggaggaggt ggggagagca cgaagctgga 100  
ggccgacact gagggagggc gggaggaggt gaagaaggag agaggggaga 150  
agaggcagga gctggaaagg agagagggag gaggaggagg agatgcggga 200  
tggagacctg gagttaggtg gcttgggaga gcttaatgaa aagagaacgg 250  
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gctgagagga gtaggaagat caggagctag agggagactg gagggttccg 350  
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 ttaaaggggac agaatactta 1670

<210> 358  
 <211> 328  
 <212> PRT  
 <213> Homo sapiens

<400> 358

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Trp	Ala	Ala	Leu	Gly	Ala	Ala	Ala	His	Ile	Gly	Pro	Ala	Pro	Asp	20	25	30	
Pro	Glu	Asp	Trp	Trp	Ser	Tyr	Lys	Asp	Asn	Leu	Gln	Gly	Asn	Phe	35	40	45	
Val	Pro	Gly	Pro	Pro	Phe	Trp	Gly	Leu	Val	Asn	Ala	Ala	Trp	Ser	50	55	60	
Leu	Cys	Ala	Val	Gly	Lys	Arg	Gln	Ser	Pro	Val	Asp	Val	Glu	Leu	65	70	75	
Lys	Arg	Val	Leu	Tyr	Asp	Pro	Phe	Leu	Pro	Pro	Leu	Arg	Leu	Ser	80	85	90	
Thr	Gly	Gly	Glu	Lys	Leu	Arg	Gly	Thr	Leu	Tyr	Asn	Thr	Gly	Arg	95	100	105	
His	Val	Ser	Phe	Leu	Pro	Ala	Pro	Arg	Pro	Val	Val	Asn	Val	Ser	110	115	120	
Gly	Gly	Pro	Leu	Leu	Tyr	Ser	His	Arg	Leu	Ser	Glu	Leu	Arg	Leu	125	130	135	
Leu	Phe	Gly	Ala	Arg	Asp	Gly	Ala	Gly	Ser	Glu	His	Gln	Ile	Asn	140	145	150	
His	Gln	Gly	Phe	Ser	Ala	Glu	Val	Gln	Leu	Ile	His	Phe	Asn	Gln	155	160	165	
Glu	Leu	Tyr	Gly	Asn	Phe	Ser	Ala	Ala	Ser	Arg	Gly	Pro	Asn	Gly				

	170		175		180									
Leu	Ala	Ile	Leu	Ser	Leu	Phe	Val	Asn	Val	Ala	Ser	Thr	Ser	Asn
	185				190				195					
Pro	Phe	Leu	Ser	Arg	Leu	Leu	Asn	Arg	Asp	Thr	Ile	Thr	Arg	Ile
	200				205				210					
Ser	Tyr	Lys	Asn	Asp	Ala	Tyr	Phe	Leu	Gln	Asp	Leu	Ser	Leu	Glu
	215				220				225					
Leu	Leu	Phe	Pro	Glu	Ser	Phe	Gly	Phe	Ile	Thr	Tyr	Gln	Gly	Ser
	230				235				240					
Leu	Ser	Thr	Pro	Pro	Cys	Ser	Glu	Thr	Val	Thr	Trp	Ile	Leu	Ile
	245				250				255					
Asp	Arg	Ala	Leu	Asn	Ile	Thr	Ser	Leu	Gln	Met	His	Ser	Leu	Arg
	260				265				270					
Leu	Leu	Ser	Gln	Asn	Pro	Pro	Ser	Gln	Ile	Phe	Gln	Ser	Leu	Ser
	275				280				285					
Gly	Asn	Ser	Arg	Pro	Leu	Gln	Pro	Leu	Ala	His	Arg	Ala	Leu	Arg
	290				295				300					
Gly	Asn	Arg	Asp	Pro	Arg	His	Pro	Glu	Arg	Arg	Cys	Arg	Gly	Pro
	305				310				315					
Asn	Tyr	Arg	Leu	His	Val	Asp	Gly	Val	Pro	His	Gly	Arg		
	320				325									

<210> 359  
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 <223> Synthetic oligonucleotide probe  
  
 <400> 360  
 gaggtctgg aagatctgag atgg 24  
  
 <210> 361  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence



<220>

<223> Synthetic oligonucleotide probe

<400> 361

gcctctttgt caacgttgcc agtacctcta acccattcct cagtcgcctc 50

<210> 362

<211> 3038

<212> DNA

<213> Homo sapiens

<400> 362

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ccgccagcct ccgccgccga gcctcgttcg tgtccccgcc cctcgctcct 100

gcagctactg ctcagaaacg ctggggcgcc caccctggca gactaacgaa 150

gcagctccct tccccccca actgcaggtc taattttgga cgctttgcct 200

gccatttctt ccaggttgag ggagccgcag aggcggaggc tcgctattc 250

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gcgagcgggg ctctccgtct gcggtccctt gtgaaggctc tgggcggctg 350

cagaggccgg ccgtccggtt tggctcacct ctcccaggaa acttcacact 400

ggagagccaa aaggagtgga agagcctgtc ttggagattt tcctggggaa 450

atcctgaggt cattcattat gaagtgtacc gcgcgggagt ggctcagagt 500

aaccacagtg ctgttcatgg ctagagcaat tccagccatg gtggttccca 550

atgccacttt attggagaaa cttttggaaa aatacatgga tgaggatggt 600

gagtgggtgga tagccaaaca acgagggaaa agggccatca cagacaatga 650

catgcagagt attttggacc ttcataataa attacgaagt cagggtgtatc 700

caacagcctc taatatggag tatatgacat gggatgtaga gctggaaaga 750

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cttgcttcca tcaattggac agaatttggg agcacactgg ggaagatata 850

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agctacccat atgaacatga atgcaacca tattgtccat tcagggtgttc 950

tggccctgta tgtacacatt atacacaggt cgtgtgggca actagtaaca 1000

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cacctagttt tggagggggc tgtagagaaa atctgtgcta caaagaaggg 1200  
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 <212> PRT  
 <213> Homo sapiens

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 Phe Met Ala Arg Ala Ile Pro Ala Met Val Val Pro Asn Ala Thr  
 20 25 30  
 Leu Leu Glu Lys Leu Leu Glu Lys Tyr Met Asp Glu Asp Gly Glu  
 35 40 45  
 Trp Trp Ile Ala Lys Gln Arg Gly Lys Arg Ala Ile Thr Asp Asn  
 50 55 60  
 Asp Met Gln Ser Ile Leu Asp Leu His Asn Lys Leu Arg Ser Gln  
 65 70 75  
 Val Tyr Pro Thr Ala Ser Asn Met Glu Tyr Met Thr Trp Asp Val  
 80 85 90  
 Glu Leu Glu Arg Ser Ala Glu Ser Trp Ala Glu Ser Cys Leu Trp  
 95 100 105  
 Glu His Gly Pro Ala Ser Leu Leu Pro Ser Ile Gly Gln Asn Leu  
 110 115 120  
 Gly Ala His Trp Gly Arg Tyr Arg Pro Pro Thr Phe His Val Gln  
 125 130 135  
 Ser Trp Tyr Asp Glu Val Lys Asp Phe Ser Tyr Pro Tyr Glu His  
 140 145 150  
 Glu Cys Asn Pro Tyr Cys Pro Phe Arg Cys Ser Gly Pro Val Cys  
 155 160 165  
 Thr His Tyr Thr Gln Val Val Trp Ala Thr Ser Asn Arg Ile Gly

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Val Asp Lys Arg Lys Thr Tyr Ile Ala Ser Phe Gln Asn Gly Ile  
470 475 480

Phe Ser Glu Ser Leu Gln Asn Pro Pro Gly Gly Lys Ala Phe Arg  
485 490 495

Val Phe Ala Val Val  
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<210> 364  
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<223> Synthetic oligonucleotide probe

<400> 364  
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<210> 365  
<211> 20  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 365  
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<210> 366  
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<400> 366  
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<400> 367  
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<210> 368  
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<400> 368

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<210> 369

<211> 1685

<212> DNA

<213> Homo sapiens

<400> 369

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ggccagcgcc ctccccatgt ccctgtctcc acgccgcgcc cctccggtca 200

gcatgaggct cctggcggcc gcgctgtctc tgctgtgtgt ggctgtgtac 250

accgcgcgtg tggacgggtc caaatgcaag tgctcccga agggacccaa 300

gatccgtac agcgacgtga agaagctgga aatgaagcca aagtaccgc 350

actgcgagga gaagatgggt atcatcacca ccaagagcgt gtccaggtac 400

cgaggtcagg agcactgcct gcaccccaag ctgcagagca ccaagcgctt 450

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aggggtgaaa acctcagaag ggaaaactcc aaaccagttg ggagacttgt 550

gcaaaggact ttgcagatta aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 600

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gcgtgcgaaa ggcttccaga tgggagaccc atctctcttg tgctccagac 750

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cagtgttgct ccattcctag cttgggaagc ttccgcttag aggtcctggc 950

gcctcggcac agctgccacg ggctctcctg ggcttatggc cggtcacagc 1000

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<210> 370

<211> 111

<212> PRT

<213> Homo sapiens

<400> 370

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Leu	Ala	Ala	Ala	Leu	Leu	Leu	Leu	Leu	Ala	Leu	Tyr	Thr	Ala	
				20				25						30
Arg	Val	Asp	Gly	Ser	Lys	Cys	Lys	Cys	Ser	Arg	Lys	Gly	Pro	Lys
				35				40						45
Ile	Arg	Tyr	Ser	Asp	Val	Lys	Lys	Leu	Glu	Met	Lys	Pro	Lys	Tyr
				50				55						60
Pro	His	Cys	Glu	Glu	Lys	Met	Val	Ile	Ile	Thr	Thr	Lys	Ser	Val
				65				70						75
Ser	Arg	Tyr	Arg	Gly	Gln	Glu	His	Cys	Leu	His	Pro	Lys	Leu	Gln
				80				85						90
Ser	Thr	Lys	Arg	Phe	Ile	Lys	Trp	Tyr	Asn	Ala	Trp	Asn	Glu	Lys
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Arg	Arg	Val	Tyr	Glu	Glu									
				110										

<210> 371

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

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<210> 372  
<211> 24  
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<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 372  
tcccaactgg tttggagttt tccc 24

<210> 373  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 373  
ctccggtcag catgaggctc ctggcgggccg ctgctcctgc tgctg 45

<210> 374  
<211> 3113  
<212> DNA  
<213> Homo sapiens

<400> 374  
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accctcattg acagccaagc acagtatcca gttgtcaaca caaattatgg 150  
caaaatccgg ggcctaagaa caccgttacc caatgagatc ttgggtccag 200  
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cggtttcagc cccagaacc cccgtcctcc tggactggca tccgaaatac 300  
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tgcattgacat gctgcccac tggtttaccg ccaatttgga tactttgatg 400  
acctatgttc aagatcaaaa tgaagactgc ctttacttaa acatctacgt 450  
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gtaatgaccg tgggaagac gaagatatc atgatcagaa cagtaagaag 550  
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catgattgac ggcagcattt tggcaagcta cggaaacgtc atcgtgatca 650





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 agagaaggaa acgtagaaat ttattattaa aagaatggac tgtgcagcga 3050  
 aatctgtacg gttctgtgca aagaggtgtt ttgccagcct gaactatatt 3100  
 taagagactt tgt 3113

<210> 375

<211> 816

<212> PRT

<213> Homo sapiens

<400> 375

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Lys	Phe	Thr	Leu	Ile	Asp	Ser	Gln	Ala	Gln	Tyr	Pro	Val	Val	Asn
			20					25						30

Thr	Asn	Tyr	Gly	Lys	Ile	Arg	Gly	Leu	Arg	Thr	Pro	Leu	Pro	Asn
			35					40						45

Glu	Ile	Leu	Gly	Pro	Val	Glu	Gln	Tyr	Leu	Gly	Val	Pro	Tyr	Ala
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	50		55		60									
Ser	Pro	Pro	Thr	Gly	Glu	Arg	Arg	Phe	Gln	Pro	Pro	Glu	Pro	Pro
				65					70					75
Ser	Ser	Trp	Thr	Gly	Ile	Arg	Asn	Thr	Thr	Gln	Phe	Ala	Ala	Val
				80					85					90
Cys	Pro	Gln	His	Leu	Asp	Glu	Arg	Ser	Leu	Leu	His	Asp	Met	Leu
				95					100					105
Pro	Ile	Trp	Phe	Thr	Ala	Asn	Leu	Asp	Thr	Leu	Met	Thr	Tyr	Val
				110					115					120
Gln	Asp	Gln	Asn	Glu	Asp	Cys	Leu	Tyr	Leu	Asn	Ile	Tyr	Val	Pro
				125					130					135
Thr	Glu	Asp	Gly	Ala	Asn	Thr	Lys	Lys	Asn	Ala	Asp	Asp	Ile	Thr
				140					145					150
Ser	Asn	Asp	Arg	Gly	Glu	Asp	Glu	Asp	Ile	His	Asp	Gln	Asn	Ser
				155					160					165
Lys	Lys	Pro	Val	Met	Val	Tyr	Ile	His	Gly	Gly	Ser	Tyr	Met	Glu
				170					175					180
Gly	Thr	Gly	Asn	Met	Ile	Asp	Gly	Ser	Ile	Leu	Ala	Ser	Tyr	Gly
				185					190					195
Asn	Val	Ile	Val	Ile	Thr	Ile	Asn	Tyr	Arg	Leu	Gly	Ile	Leu	Gly
				200					205					210
Phe	Leu	Ser	Thr	Gly	Asp	Gln	Ala	Ala	Lys	Gly	Asn	Tyr	Gly	Leu
				215					220					225
Leu	Asp	Gln	Ile	Gln	Ala	Leu	Arg	Trp	Ile	Glu	Glu	Asn	Val	Gly
				230					235					240
Ala	Phe	Gly	Gly	Asp	Pro	Lys	Arg	Val	Thr	Ile	Phe	Gly	Ser	Gly
				245					250					255
Ala	Gly	Ala	Ser	Cys	Val	Ser	Leu	Leu	Thr	Leu	Ser	His	Tyr	Ser
				260					265					270
Glu	Gly	Leu	Phe	Gln	Lys	Ala	Ile	Ile	Gln	Ser	Gly	Thr	Ala	Leu
				275					280					285
Ser	Ser	Trp	Ala	Val	Asn	Tyr	Gln	Pro	Ala	Lys	Tyr	Thr	Arg	Ile
				290					295					300
Leu	Ala	Asp	Lys	Val	Gly	Cys	Asn	Met	Leu	Asp	Thr	Thr	Asp	Met
				305					310					315
Val	Glu	Cys	Leu	Arg	Asn	Lys	Asn	Tyr	Lys	Glu	Leu	Ile	Gln	Gln
				320					325					330
Thr	Ile	Thr	Pro	Ala	Thr	Tyr	His	Ile	Ala	Phe	Gly	Pro	Val	Ile
				335					340					345

Asp	Gly	Asp	Val	Ile	Pro	Asp	Asp	Pro	Gln	Ile	Leu	Met	Glu	Gln	350	355	360
Gly	Glu	Phe	Leu	Asn	Tyr	Asp	Ile	Met	Leu	Gly	Val	Asn	Gln	Gly	365	370	375
Glu	Gly	Leu	Lys	Phe	Val	Asp	Gly	Ile	Val	Asp	Asn	Glu	Asp	Gly	380	385	390
Val	Thr	Pro	Asn	Asp	Phe	Asp	Phe	Ser	Val	Ser	Asn	Phe	Val	Asp	395	400	405
Asn	Leu	Tyr	Gly	Tyr	Pro	Glu	Gly	Lys	Asp	Thr	Leu	Arg	Glu	Thr	410	415	420
Ile	Lys	Phe	Met	Tyr	Thr	Asp	Trp	Ala	Asp	Lys	Glu	Asn	Pro	Glu	425	430	435
Thr	Arg	Arg	Lys	Thr	Leu	Val	Ala	Leu	Phe	Thr	Asp	His	Gln	Trp	440	445	450
Val	Ala	Pro	Ala	Val	Ala	Ala	Asp	Leu	His	Ala	Gln	Tyr	Gly	Ser	455	460	465
Pro	Thr	Tyr	Phe	Tyr	Ala	Phe	Tyr	His	His	Cys	Gln	Ser	Glu	Met	470	475	480
Lys	Pro	Ser	Trp	Ala	Asp	Ser	Ala	His	Gly	Asp	Glu	Val	Pro	Tyr	485	490	495
Val	Phe	Gly	Ile	Pro	Met	Ile	Gly	Pro	Thr	Glu	Leu	Phe	Ser	Cys	500	505	510
Asn	Phe	Ser	Lys	Asn	Asp	Val	Met	Leu	Ser	Ala	Val	Val	Met	Thr	515	520	525
Tyr	Trp	Thr	Asn	Phe	Ala	Lys	Thr	Gly	Asp	Pro	Asn	Gln	Pro	Val	530	535	540
Pro	Gln	Asp	Thr	Lys	Phe	Ile	His	Thr	Lys	Pro	Asn	Arg	Phe	Glu	545	550	555
Glu	Val	Ala	Trp	Ser	Lys	Tyr	Asn	Pro	Lys	Asp	Gln	Leu	Tyr	Leu	560	565	570
His	Ile	Gly	Leu	Lys	Pro	Arg	Val	Arg	Asp	His	Tyr	Arg	Ala	Thr	575	580	585
Lys	Val	Ala	Phe	Trp	Leu	Glu	Leu	Val	Pro	His	Leu	His	Asn	Leu	590	595	600
Asn	Glu	Ile	Phe	Gln	Tyr	Val	Ser	Thr	Thr	Thr	Lys	Val	Pro	Pro	605	610	615
Pro	Asp	Met	Thr	Ser	Phe	Pro	Tyr	Gly	Thr	Arg	Arg	Ser	Pro	Ala	620	625	630
Lys	Ile	Trp	Pro	Thr	Thr	Lys	Arg	Pro	Ala	Ile	Thr	Pro	Ala	Asn			

635	640	645
Asn Pro Lys His Ser Lys Asp Pro His	Lys Thr Gly Pro Glu Asp	
650	655	660
Thr Thr Val Leu Ile Glu Thr Lys Arg	Asp Tyr Ser Thr Glu Leu	
665	670	675
Ser Val Thr Ile Ala Val Gly Ala Ser	Leu Leu Phe Leu Asn Ile	
680	685	690
Leu Ala Phe Ala Ala Leu Tyr Tyr Lys	Lys Asp Lys Arg Arg His	
695	700	705
Glu Thr His Arg Arg Pro Ser Pro Gln	Arg Asn Thr Thr Asn Asp	
710	715	720
Ile Ala His Ile Gln Asn Glu Glu Ile	Met Ser Leu Gln Met Lys	
725	730	735
Gln Leu Glu His Asp His Glu Cys Glu	Ser Leu Gln Ala His Asp	
740	745	750
Thr Leu Arg Leu Thr Cys Pro Pro Asp	Tyr Thr Leu Thr Leu Arg	
755	760	765
Arg Ser Pro Asp Asp Ile Pro Leu Met	Thr Pro Asn Thr Ile Thr	
770	775	780
Met Ile Pro Asn Thr Leu Thr Gly Met	Gln Pro Leu His Thr Phe	
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His Ser Thr Thr Arg Val		
815		

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 <210> 377  
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 <223> Synthetic oligonucleotide probe  
  
 <400> 377

aacccccgag ccaaaagatg gtcac 25

<210> 378

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 378

gtaccgggtga ccaggcagca aaaggcaact atgggctcct ggatcag 47

<210> 379

<211> 2461

<212> DNA

<213> Homo sapiens

<400> 379

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ttgttggggc ctgggcaggg gccacagcaa gtcggggcgg gtcaaacgtt 150

cgagtacttg aaacgggagc actcgctgtc gaagccctac cagggtgtgg 200

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gtggaaccgg gtgccatgtt tcttgagaga ctgggagttg cagggtgcact 350

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gctgcctgag atgacagctc cactgccgcc cctgagtggc ctggccctct 950

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<210> 380

<211> 348

<212> PRT

<213> Homo sapiens

<400> 380

Met	Ala	Ala	Thr	Leu	Gly	Pro	Leu	Gly	Ser	Trp	Gln	Gln	Trp	Arg	
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Arg	Cys	Leu	Ser	Ala	Arg	Asp	Gly	Ser	Arg	Met	Leu	Leu	Leu	Leu	
				20					25					30	
Leu	Leu	Leu	Gly	Ser	Gly	Gln	Gly	Pro	Gln	Gln	Val	Gly	Ala	Gly	
				35					40					45	
Gln	Thr	Phe	Glu	Tyr	Leu	Lys	Arg	Glu	His	Ser	Leu	Ser	Lys	Pro	
				50					55					60	
Tyr	Gln	Gly	Val	Gly	Thr	Gly	Ser	Ser	Ser	Leu	Trp	Asn	Leu	Met	
				65					70					75	
Gly	Asn	Ala	Met	Val	Met	Thr	Gln	Tyr	Ile	Arg	Leu	Thr	Pro	Asp	
				80					85					90	
Met	Gln	Ser	Lys	Gln	Gly	Ala	Leu	Trp	Asn	Arg	Val	Pro	Cys	Phe	
				95					100					105	
Leu	Arg	Asp	Trp	Glu	Leu	Gln	Val	His	Phe	Lys	Ile	His	Gly	Gln	
				110					115					120	
Gly	Lys	Lys	Asn	Leu	His	Gly	Asp	Gly	Leu	Ala	Ile	Trp	Tyr	Thr	
				125					130					135	
Lys	Asp	Arg	Met	Gln	Pro	Gly	Pro	Val	Phe	Gly	Asn	Met	Asp	Lys	
				140					145					150	
Phe	Val	Gly	Leu	Gly	Val	Phe	Val	Asp	Thr	Tyr	Pro	Asn	Glu	Glu	
				155					160					165	
Lys	Gln	Gln	Glu	Arg	Val	Phe	Pro	Tyr	Ile	Ser	Ala	Met	Val	Asn	
				170					175					180	
Asn	Gly	Ser	Leu	Ser	Tyr	Asp	His	Glu	Arg	Asp	Gly	Arg	Pro	Thr	
				185					190					195	
Glu	Leu	Gly	Gly	Cys	Thr	Ala	Ile	Val	Arg	Asn	Leu	His	Tyr	Asp	
				200					205					210	
Thr	Phe	Leu	Val	Ile	Arg	Tyr	Val	Lys	Arg	His	Leu	Thr	Ile	Met	
				215					220					225	
Met	Asp	Ile	Asp	Gly	Lys	His	Glu	Trp	Arg	Asp	Cys	Ile	Glu	Val	
				230					235					240	
Pro	Gly	Val	Arg	Leu	Pro	Arg	Gly	Tyr	Tyr	Phe	Gly	Thr	Ser	Ser	
				245					250					255	



Ile Thr Gly Asp	Leu Ser Asp Asn His	Asp Val Ile Ser Leu Lys
260	265	270
Leu Phe Glu Leu Thr Val Glu Arg Thr	Pro Glu Glu Glu Lys Leu	
275	280	285
His Arg Asp Val Phe Leu Pro Ser Val	Asp Asn Met Lys Leu Pro	
290	295	300
Glu Met Thr Ala Pro Leu Pro Pro Leu	Ser Gly Leu Ala Leu Phe	
305	310	315
Leu Ile Val Phe Phe Ser Leu Val Phe	Ser Val Phe Ala Ile Val	
320	325	330
Ile Gly Ile Ile Leu Tyr Asn Lys Trp	Gln Glu Gln Ser Arg Lys	
335	340	345

Arg Phe Tyr

<210> 381  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 381  
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<210> 382  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 382  
 cactctccag gctgcatgct cagg 24

<210> 383  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 383  
 gtcaaacgtt cgagtacttg aaacgggagc actcgctgtc gaagc 45

<210> 384  
 <211> 3150  
 <212> DNA  
 <213> Homo sapiens

<400> 384

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ggggactcca agatttccat gaagaaaatc agttgtcttc attcaagaat 150  
tgggggtctgg ctccagaatc ctgcagctgg tgaaaatctg ttttctagaa 200  
gagggtttaat taatgcctgc agtctgacat gttcccgatt tgaggtgaaa 250  
ccatgaagag aaaatagaat acttaataat gcttttccgc aaccgcttct 300  
tgctgctgct ggccctggct gcgctgctgg cctttgtgag cctcagcctg 350  
cagttcttcc acctgatccc ggtgtcgact cctaagaatg gaatgagtag 400  
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cagaccccggt ttatgaagct cttttgtact gcaacatccc cagtgtggcc 500  
gagcgcagca tggaagggtca tgcccgcacat cattttaagc tgggtctcagt 550  
gcatgtgttc attcgccacg gagacaggta cccactgtat gtcattcca 600  
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agcctctttc gaaagcccct tgaactcctt gcctctttac ccaaaccacc 750  
cattgtgtga gatgggagag ctccacacaga caggagtgtg gcagcatttg 800  
cagaacggtc agctgctgag ggatatctat ctaaagaaac acaaactcct 850  
gcccattgat tgggtctgcag accagctcta tttagagacc actgggaaaa 900  
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aagaccatc agatcgagga tgaaagggaa agacgggaga agaaattgta 1300  
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gccggatgca gcgtgccacc gagggcagga aagaagagct ctttgcctc 1400  
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 ggcgtegatg tcacattcca cacctctttc tgccaagacc accacaagcg 1600  
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 ccacagatgg ttgggggttga acagtaagca cattgctgca atgtggtacg 1900  
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 tatcatagcc agacttcgct tagaatgccga gaataatata gttcaagacc 2000  
 tgaagttgcc aatccaagtt tgcactcttc tggcctgccc catgttacta 2050  
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 tgatttctga actaatgggtg ctaattcaga gaaatggaaa gtgaaagtga 3050  
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<210> 385  
 <211> 480  
 <212> PRT  
 <213> Homo sapiens

<400> 385  
 Met Leu Phe Arg Asn Arg Phe Leu Leu Leu Leu Ala Leu Ala Ala  
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 Leu Leu Ala Phe Val Ser Leu Ser Leu Gln Phe Phe His Leu Ile  
 20 25 30  
 Pro Val Ser Thr Pro Lys Asn Gly Met Ser Ser Lys Ser Arg Lys  
 35 40 45  
 Arg Ile Met Pro Asp Pro Val Thr Glu Pro Pro Val Thr Asp Pro  
 50 55 60  
 Val Tyr Glu Ala Leu Leu Tyr Cys Asn Ile Pro Ser Val Ala Glu  
 65 70 75  
 Arg Ser Met Glu Gly His Ala Pro His His Phe Lys Leu Val Ser  
 80 85 90  
 Val His Val Phe Ile Arg His Gly Asp Arg Tyr Pro Leu Tyr Val  
 95 100 105  
 Ile Pro Lys Thr Lys Arg Pro Glu Ile Asp Cys Thr Leu Val Ala  
 110 115 120  
 Asn Arg Lys Pro Tyr His Pro Lys Leu Glu Ala Phe Ile Ser His  
 125 130 135  
 Met Ser Lys Gly Ser Gly Ala Ser Phe Glu Ser Pro Leu Asn Ser  
 140 145 150  
 Leu Pro Leu Tyr Pro Asn His Pro Leu Cys Glu Met Gly Glu Leu  
 155 160 165  
 Thr Gln Thr Gly Val Val Gln His Leu Gln Asn Gly Gln Leu Leu  
 170 175 180  
 Arg Asp Ile Tyr Leu Lys Lys His Lys Leu Leu Pro Asn Asp Trp  
 185 190 195  
 Ser Ala Asp Gln Leu Tyr Leu Glu Thr Thr Gly Lys Ser Arg Thr  
 200 205 210

Leu	Gln	Ser	Gly	Leu	Ala	Leu	Leu	Tyr	Gly	Phe	Leu	Pro	Asp	Phe	215	220	225
Asp	Trp	Lys	Lys	Ile	Tyr	Phe	Arg	His	Gln	Pro	Ser	Ala	Leu	Phe	230	235	240
Cys	Ser	Gly	Ser	Cys	Tyr	Cys	Pro	Val	Arg	Asn	Gln	Tyr	Leu	Glu	245	250	255
Lys	Glu	Gln	Arg	Arg	Gln	Tyr	Leu	Leu	Arg	Leu	Lys	Asn	Ser	Gln	260	265	270
Leu	Glu	Lys	Thr	Tyr	Gly	Glu	Met	Ala	Lys	Ile	Val	Asp	Val	Pro	275	280	285
Thr	Lys	Gln	Leu	Arg	Ala	Ala	Asn	Pro	Ile	Asp	Ser	Met	Leu	Cys	290	295	300
His	Phe	Cys	His	Asn	Val	Ser	Phe	Pro	Cys	Thr	Arg	Asn	Gly	Cys	305	310	315
Val	Asp	Met	Glu	His	Phe	Lys	Val	Ile	Lys	Thr	His	Gln	Ile	Glu	320	325	330
Asp	Glu	Arg	Glu	Arg	Arg	Glu	Lys	Lys	Leu	Tyr	Phe	Gly	Tyr	Ser	335	340	345
Leu	Leu	Gly	Ala	His	Pro	Ile	Leu	Asn	Gln	Thr	Ile	Gly	Arg	Met	350	355	360
Gln	Arg	Ala	Thr	Glu	Gly	Arg	Lys	Glu	Glu	Leu	Phe	Ala	Leu	Tyr	365	370	375
Ser	Ala	His	Asp	Val	Thr	Leu	Ser	Pro	Val	Leu	Ser	Ala	Leu	Gly	380	385	390
Leu	Ser	Glu	Ala	Arg	Phe	Pro	Arg	Phe	Ala	Ala	Arg	Leu	Ile	Phe	395	400	405
Glu	Leu	Trp	Gln	Asp	Arg	Glu	Lys	Pro	Ser	Glu	His	Ser	Val	Arg	410	415	420
Ile	Leu	Tyr	Asn	Gly	Val	Asp	Val	Thr	Phe	His	Thr	Ser	Phe	Cys	425	430	435
Gln	Asp	His	His	Lys	Arg	Ser	Pro	Lys	Pro	Met	Cys	Pro	Leu	Glu	440	445	450
Asn	Leu	Val	Arg	Phe	Val	Lys	Arg	Asp	Met	Phe	Val	Ala	Leu	Gly	455	460	465
Gly	Ser	Gly	Thr	Asn	Tyr	Tyr	Asp	Ala	Cys	His	Arg	Glu	Gly	Phe	470	475	480

<210> 386  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 386  
ccaagcagct tagagctcca gacc 24

<210> 387  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 387  
ttccctatgc tctgtattgg catgg 25

<210> 388  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 388  
gccacttctg ccacaatgtc agctttccct gtaccagaaa tggctgtgtt 50

<210> 389  
<211> 3313  
<212> DNA  
<213> Homo sapiens

<400> 389  
aaaaaagctc actaaagttt ctattagagc gaatacggta gatttccatc 50  
cccttttgaa gaacagtact gtggagctat ttaagagata aaaacgaaat 100  
atcctttctg ggagttcaag attgtgcagt aattggttag gactctgagc 150  
gccgctgttc accaatcggg gagagaaaag cggagatcct gctcgccttg 200  
cacgcgcctg aagcacaaaag cagatagcta ggaatgaacc atccctggga 250  
gtatgtggaa acaacggagg agctctgact tcccaactgt cccattctat 300  
gggcgaagga actgctcctg acttcagtgg ttaagggcag aattgaaaat 350  
aattctggag gaagataaga atgattcctg cgcgactgca ccgggactac 400  
aaagggcttg tctgctggg aatcctcctg gggactctgt gggagaccgg 450  
atgcacccag atacgctatt cagttccgga agagctggag aaaggctcta 500  
gggtgggcga catctccagg gacctggggc tggagccccg ggagctcgcg 550  
gagcgcggag tccgcatcat cccagaggt aggacgcagc ttttcgcctt 600

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 tggacagaga ctccggccag aacgcctggc tgtcctaccg tctgctcaag 2200  
 gccagcgagc cgggactctt ctccggtgggt ctgcacacgg gcgaggtgcg 2250  
 cacggcgcgga gccctgctgg acagagacgc gctcaagcag agcctcgtag 2300  
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 accgtggcgg tggccgacag catcccccaa gtcttggcgg acctcggcag 2400  
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 aaaaatacaa aattagccgg gcgtgggtgg gcatgtctgt aatcccagct 3200  
 acttgggagg ctgagtcagg agaattgctt taacctggga ggtggaggtt 3250  
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 aaactctatc tca 3313

<210> 390  
 <211> 916  
 <212> PRT  
 <213> Homo sapiens  
 <400> 390



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Leu	Gly	Ile	Leu	Leu	Gly	Thr	Leu	Trp	Glu	Thr	Gly	Cys	Thr	Gln	
			20						25					30	
Ile	Arg	Tyr	Ser	Val	Pro	Glu	Glu	Leu	Glu	Lys	Gly	Ser	Arg	Val	
			35						40					45	
Gly	Asp	Ile	Ser	Arg	Asp	Leu	Gly	Leu	Glu	Pro	Arg	Glu	Leu	Ala	
			50						55					60	
Glu	Arg	Gly	Val	Arg	Ile	Ile	Pro	Arg	Gly	Arg	Thr	Gln	Leu	Phe	
			65						70					75	
Ala	Leu	Asn	Pro	Arg	Ser	Gly	Ser	Leu	Val	Thr	Ala	Gly	Arg	Ile	
			80						85					90	
Asp	Arg	Glu	Glu	Leu	Cys	Met	Gly	Ala	Ile	Lys	Cys	Gln	Leu	Asn	
			95						100					105	
Leu	Asp	Ile	Leu	Met	Glu	Asp	Lys	Val	Lys	Ile	Tyr	Gly	Val	Glu	
			110						115					120	
Val	Glu	Val	Arg	Asp	Ile	Asn	Asp	Asn	Ala	Pro	Tyr	Phe	Arg	Glu	
			125						130					135	
Ser	Glu	Leu	Glu	Ile	Lys	Ile	Ser	Glu	Asn	Ala	Ala	Thr	Glu	Met	
			140						145					150	
Arg	Phe	Pro	Leu	Pro	His	Ala	Trp	Asp	Pro	Asp	Ile	Gly	Lys	Asn	
			155						160					165	
Ser	Leu	Gln	Ser	Tyr	Glu	Leu	Ser	Pro	Asn	Thr	His	Phe	Ser	Leu	
			170						175					180	
Ile	Val	Gln	Asn	Gly	Ala	Asp	Gly	Ser	Lys	Tyr	Pro	Glu	Leu	Val	
			185						190					195	
Leu	Lys	Arg	Ala	Leu	Asp	Arg	Glu	Glu	Lys	Ala	Ala	His	His	Leu	
			200						205					210	
Val	Leu	Thr	Ala	Ser	Asp	Gly	Gly	Asp	Pro	Val	Arg	Thr	Gly	Thr	
			215						220					225	
Ala	Arg	Ile	Arg	Val	Met	Val	Leu	Asp	Ala	Asn	Asp	Asn	Ala	Pro	
			230						235					240	
Ala	Phe	Ala	Gln	Pro	Glu	Tyr	Arg	Ala	Ser	Val	Pro	Glu	Asn	Leu	
			245						250					255	
Ala	Leu	Gly	Thr	Gln	Leu	Leu	Val	Val	Asn	Ala	Thr	Asp	Pro	Asp	
			260						265					270	
Glu	Gly	Val	Asn	Ala	Glu	Val	Arg	Tyr	Ser	Phe	Arg	Tyr	Val	Asp	
			275						280					285	
Asp	Lys	Ala	Ala	Gln	Val	Phe	Lys	Leu	Asp	Cys	Asn	Ser	Gly	Thr	

	290		295		300
Ile Ser Thr Ile	Gly Glu Leu Asp His	Glu Glu Ser Gly Phe Tyr			
	305	310			315
Gln Met Glu Val	Gln Ala Met Asp Asn	Ala Gly Tyr Ser Ala Arg			
	320	325			330
Ala Lys Val Leu	Ile Thr Val Leu Asp	Val Asn Asp Asn Ala Pro			
	335	340			345
Glu Val Val Leu	Thr Ser Leu Ala Ser	Ser Val Pro Glu Asn Ser			
	350	355			360
Pro Arg Gly Thr	Leu Ile Ala Leu Leu	Asn Val Asn Asp Gln Asp			
	365	370			375
Ser Glu Glu Asn	Gly Gln Val Ile Cys	Phe Ile Gln Gly Asn Leu			
	380	385			390
Pro Phe Lys Leu	Glu Lys Ser Tyr Gly	Asn Tyr Tyr Ser Leu Val			
	395	400			405
Thr Asp Ile Val	Leu Asp Arg Glu Gln	Val Pro Ser Tyr Asn Ile			
	410	415			420
Thr Val Thr Ala	Thr Asp Arg Gly Thr	Pro Pro Leu Ser Thr Glu			
	425	430			435
Thr His Ile Ser	Leu Asn Val Ala Asp	Thr Asn Asp Asn Pro Pro			
	440	445			450
Val Phe Pro Gln	Ala Ser Tyr Ser Ala	Tyr Ile Pro Glu Asn Asn			
	455	460			465
Pro Arg Gly Val	Ser Leu Val Ser Val	Thr Ala His Asp Pro Asp			
	470	475			480
Cys Glu Glu Asn	Ala Gln Ile Thr Tyr	Ser Leu Ala Glu Asn Thr			
	485	490			495
Ile Gln Gly Ala	Ser Leu Ser Ser Tyr	Val Ser Ile Asn Ser Asp			
	500	505			510
Thr Gly Val Leu	Tyr Ala Leu Ser Ser	Phe Asp Tyr Glu Gln Phe			
	515	520			525
Arg Asp Leu Gln	Val Lys Val Met Ala	Arg Asp Asn Gly His Pro			
	530	535			540
Pro Leu Ser Ser	Asn Val Ser Leu Ser	Leu Phe Val Leu Asp Gln			
	545	550			555
Asn Asp Asn Ala	Pro Glu Ile Leu Tyr	Pro Ala Leu Pro Thr Asp			
	560	565			570
Gly Ser Thr Gly	Val Glu Leu Ala Pro	Arg Ser Ala Glu Pro Gly			
	575	580			585

Tyr	Leu	Val	Thr	Lys	Val	Val	Ala	Val	Asp	Arg	Asp	Ser	Gly	Gln	590	595	600
Asn	Ala	Trp	Leu	Ser	Tyr	Arg	Leu	Leu	Lys	Ala	Ser	Glu	Pro	Gly	605	610	615
Leu	Phe	Ser	Val	Gly	Leu	His	Thr	Gly	Glu	Val	Arg	Thr	Ala	Arg	620	625	630
Ala	Leu	Leu	Asp	Arg	Asp	Ala	Leu	Lys	Gln	Ser	Leu	Val	Val	Ala	635	640	645
Val	Gln	Asp	His	Gly	Gln	Pro	Pro	Leu	Ser	Ala	Thr	Val	Thr	Leu	650	655	660
Thr	Val	Ala	Val	Ala	Asp	Ser	Ile	Pro	Gln	Val	Leu	Ala	Asp	Leu	665	670	675
Gly	Ser	Leu	Glu	Ser	Pro	Ala	Asn	Ser	Glu	Thr	Ser	Asp	Leu	Thr	680	685	690
Leu	Tyr	Leu	Val	Val	Ala	Val	Ala	Ala	Val	Ser	Cys	Val	Phe	Leu	695	700	705
Ala	Phe	Val	Ile	Leu	Leu	Leu	Ala	Leu	Arg	Leu	Arg	Arg	Trp	His	710	715	720
Lys	Ser	Arg	Leu	Leu	Gln	Ala	Ser	Gly	Gly	Gly	Leu	Thr	Gly	Ala	725	730	735
Pro	Ala	Ser	His	Phe	Val	Gly	Val	Asp	Gly	Val	Gln	Ala	Phe	Leu	740	745	750
Gln	Thr	Tyr	Ser	His	Glu	Val	Ser	Leu	Thr	Thr	Asp	Ser	Arg	Lys	755	760	765
Ser	His	Leu	Ile	Phe	Pro	Gln	Pro	Asn	Tyr	Ala	Asp	Met	Leu	Val	770	775	780
Ser	Gln	Glu	Ser	Phe	Glu	Lys	Ser	Glu	Pro	Leu	Leu	Leu	Ser	Gly	785	790	795
Asp	Ser	Val	Phe	Ser	Lys	Asp	Ser	His	Gly	Leu	Ile	Glu	Val	Ser	800	805	810
Leu	Tyr	Gln	Ile	Phe	Phe	Leu	Phe	Phe	Phe	Asn	Cys	Ser	Val	Ser	815	820	825
Gln	Ala	Gly	Val	Gln	Arg	Tyr	Asp	His	Ser	Ser	Leu	Arg	Pro	Gln	830	835	840
Thr	Pro	Arg	Leu	Lys	Gln	Leu	Ser	His	Leu	Cys	Leu	Arg	Cys	Asn	845	850	855
Arg	Asp	Tyr	Arg	Cys	Lys	Pro	Pro	Thr	Val	Cys	Leu	Ser	Ile	Tyr	860	865	870
Leu	Ser	Ile	Tyr	Leu	Ser	Ile	Tyr	Leu	Ser	Ile	Tyr	Leu	Leu	Leu			

	875		880		885
Ser Cys Thr Asp Gly Ser Leu Thr Pro Val Ile Pro Val Leu Trp					
	890		895		900
Glu Ala Glu Ala Gly Gly Ser Pro Glu Val Gly Ser Leu Arg Pro					
	905		910		915

Ala

<210> 391  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 391  
 tccgtctctg tgaaccgccc cac 23

<210> 392  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 392  
 ctcgggcgca ttgtcgttct ggtc 24

<210> 393  
 <211> 40  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 393  
 ccgactgtga aagagaacgc ccagatcca cttgttcccc 40

<210> 394  
 <211> 999  
 <212> DNA  
 <213> Homo sapiens

<400> 394  
 cccaggctct agtgcaggag gagaaggagg aggagcagga ggtggagatt 50  
 cccagttaaa aggctccaga atcgtgtacc aggcagagaa ctgaagtact 100  
 ggggcctcct ccaactgggtc cgaatcagta ggtgaccccg cccctggatt 150  
 ctggaagacc tcaccatggg acgccccga cctcgtgcgg ccaagacgtg 200

gatgttcctg ctcttgctgg ggggagcctg ggcaggacac tccagggcac 250  
aggaggacaa ggtgctgggg ggtcatgagt gccaacccca ttcgcagcct 300  
tggcaggcgg ccttgttcca gggccagcaa ctactctgtg gcggtgtcct 350  
tgtaggtggc aactgggtcc ttacagctgc ccactgtaaa aaaccgaaat 400  
acacagtacg cctgggagac cacagcctac agaataaaga tggcccagag 450  
caagaaatac ctgtggttca gtccatccca caccctgtct acaacagcag 500  
cgatgtggag gaccacaacc atgatctgat gcttcttcaa ctgcgtgacc 550  
aggcatccct ggggtccaaa gtgaagccca tcagcctggc agatcattgc 600  
acccagcctg gccagaagtg caccgtctca ggctggggca ctgtcaccag 650  
tccccgagag aattttcctg acactctcaa ctgtgcagaa gtaaaaatct 700  
ttccccagaa gaagtgtgag gatgcttacc cggggcagat cacagatggc 750  
atggtctgtg caggcagcag caaaggggct gacacgtgcc agggcgattc 800  
tggaggcccc ctggtgtgtg atggtgcact ccagggcata acatcctggg 850  
gctcagaccc ctgtgggagg tccgacaaac ctggcgtcta taccaacatc 900  
tgccgctacc tggactggat caagaagatc ataggcagca agggctgatt 950  
ctaggataag cactagatct cccttaataa actcacaact ctctggttc 999

<210> 395

<211> 260

<212> PRT

<213> Homo sapiens

<400> 395

Met	Gly	Arg	Pro	Arg	Pro	Arg	Ala	Ala	Lys	Thr	Trp	Met	Phe	Leu
1				5					10					15
Leu	Leu	Leu	Gly	Gly	Ala	Trp	Ala	Gly	His	Ser	Arg	Ala	Gln	Glu
			20						25					30
Asp	Lys	Val	Leu	Gly	Gly	His	Glu	Cys	Gln	Pro	His	Ser	Gln	Pro
			35						40					45
Trp	Gln	Ala	Ala	Leu	Phe	Gln	Gly	Gln	Gln	Leu	Leu	Cys	Gly	Gly
			50						55					60
Val	Leu	Val	Gly	Gly	Asn	Trp	Val	Leu	Thr	Ala	Ala	His	Cys	Lys
			65						70					75
Lys	Pro	Lys	Tyr	Thr	Val	Arg	Leu	Gly	Asp	His	Ser	Leu	Gln	Asn
			80						85					90
Lys	Asp	Gly	Pro	Glu	Gln	Glu	Ile	Pro	Val	Val	Gln	Ser	Ile	Pro
			95						100					105

His	Pro	Cys	Tyr	Asn	Ser	Ser	Asp	Val	Glu	Asp	His	Asn	His	Asp
				110					115					120
Leu	Met	Leu	Leu	Gln	Leu	Arg	Asp	Gln	Ala	Ser	Leu	Gly	Ser	Lys
				125					130					135
Val	Lys	Pro	Ile	Ser	Leu	Ala	Asp	His	Cys	Thr	Gln	Pro	Gly	Gln
				140					145					150
Lys	Cys	Thr	Val	Ser	Gly	Trp	Gly	Thr	Val	Thr	Ser	Pro	Arg	Glu
				155					160					165
Asn	Phe	Pro	Asp	Thr	Leu	Asn	Cys	Ala	Glu	Val	Lys	Ile	Phe	Pro
				170					175					180
Gln	Lys	Lys	Cys	Glu	Asp	Ala	Tyr	Pro	Gly	Gln	Ile	Thr	Asp	Gly
				185					190					195
Met	Val	Cys	Ala	Gly	Ser	Ser	Lys	Gly	Ala	Asp	Thr	Cys	Gln	Gly
				200					205					210
Asp	Ser	Gly	Gly	Pro	Leu	Val	Cys	Asp	Gly	Ala	Leu	Gln	Gly	Ile
				215					220					225
Thr	Ser	Trp	Gly	Ser	Asp	Pro	Cys	Gly	Arg	Ser	Asp	Lys	Pro	Gly
				230					235					240
Val	Tyr	Thr	Asn	Ile	Cys	Arg	Tyr	Leu	Asp	Trp	Ile	Lys	Lys	Ile
				245					250					255
Ile	Gly	Ser	Lys	Gly										
				260										

<210> 396  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 396  
 cagcctacag aataaagatg gcc 24  
  
 <210> 397  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 397  
 ggtgcaatga tctgccaggc tgat 24  
  
 <210> 398  
 <211> 48  
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 398

agaaataacct gtggttcagt ccatcccaaa cccctgctac aacagcag 48

<210> 399

<211> 2236

<212> DNA

<213> Homo sapiens

<400> 399

ggcgccggtg caccgggagg gctgagcgcc tcctgcggcc cggcctgcgc 50  
gccccggccc gccgcggcgc ccacgcccc accccggccc gcgcccccta 100  
gccccgccc gggcccggc ccgcggcgc gccaggtga gcgtccgcc 150  
cgccgcgagg cccgccccg gccgccccg gcccgcccc ggccggcggg 200  
ggaaccgggc ggattcctcg cgcgtcaaac cacctgatcc cataaaacat 250  
tcattctccc ggcgcccggc gctgcgagcg ccccgccagt ccgcgcggcc 300  
gccgcccctg cctgtgcgc cctgcgcgcc ctgcgcaccc gcggcccgag 350  
cccagccaga gccgggagg ggcgagcgcg ccgagcctcg tcccgcgcc 400  
gggcccgggc cgggcccgtg cggcgggcgcc tggatgcgga cccggccgcg 450  
gggagacggg cggccgccc gaaacgactt tcagtccccg acgcgccccg 500  
cccaacccct acgatgaaga gggcgctccg tggagggagc cggctgctgg 550  
catgggtgct gtggctgcag gcctggcagg tggcagcccc atgccaggt 600  
gcctgcgtat gctacaatga gccaagggtg acgacaagct gccccagca 650  
gggcctgcag gctgtgcccg tgggcatccc tgctgccagc cagcgcatt 700  
tcctgcacgg caaccgcac tcgcatgtgc cagctgccag cttccgtgcc 750  
tgccgaacc tcaccatcct gtggctgcac tcgaatgtgc tggccgaat 800  
tgatgcggct gccttcaact gcctggccct cctggagcag ctggacctca 850  
gcgataatgc acagctccg tctgtggacc ctgccacatt ccacggcctg 900  
ggccgcctac acacgctgca cctggaccgc tgcggcctgc aggagctggg 950  
cccggggctg ttccgcgcc tggctgccct gcagtacct tacctgcagg 1000  
acaacgcgct gcaggcactg cctgatgaca cttccgcga cctgggcaac 1050  
ctcacacacc tcttctgca cggcaaccgc atctccagcg tgcccgagcg 1100

cgccttccgt gggctgcaca gcctcgaccg tctcctactg caccagaacc 1150  
 gcgtggccca tgtgcacccg catgccttcc gtgaccttgg ccgcctcatg 1200  
 acactctatc tgtttgccaa caatctatca gcgctgcca ctgaggccct 1250  
 gggccccctg cgtgccctgc agtacctgag gctcaacgac aacccttggg 1300  
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 ctggggcttc ccaagtgtg ccagccagat gccgctgaca aggcctcagt 1550  
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 aatgactcac cctttgggac tctgcctggc tctgctgagc ccccgctcac 1700  
 tgcagtgcgg cccgagggtt ccgagccacc agggttcccc acctcgggcc 1750  
 ctgcgccggg gccaggtgtt tcacgcaaga accgcacccg cagccactgc 1800  
 cgtctggggc aggcaggcag cgggggtggc gggactggtg actcagaagg 1850  
 ctcaggtgcc ctaccagcc tcacctgcag cctcaccccc ctgggccttg 1900  
 cgctggtgct gtggacagt cttgggccc gctgaccccc agcggacaca 1950  
 agagcgtgct cagcagccag gtgtgtgtac atacgggggtc tctctccacg 2000  
 ccgccaagcc agccgggccc ccgaccctg gggcaggcca ggccaggtcc 2050  
 tccctgatgg acgcctgccg cccgccaccc ccatctccac cccatcatgt 2100  
 ttacagggtt cggcggcagc gtttgttcca gaacgccgcc tcccaccag 2150  
 atcgcggtat atagagatat gcattttatt ttacttgtgt aaaaatatcg 2200  
 gacgacgtgg aataaagagc tcttttctta aaaaaa 2236

<210> 400  
 <211> 473  
 <212> PRT  
 <213> Homo sapiens

<400> 400  
 Met Lys Arg Ala Ser Ala Gly Gly Ser Arg Leu Leu Ala Trp Val  
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 Leu Trp Leu Gln Ala Trp Gln Val Ala Ala Pro Cys Pro Gly Ala  
 20 25 30



Cys	Val	Cys	Tyr	Asn	Glu	Pro	Lys	Val	Thr	Thr	Ser	Cys	Pro	Gln	35	40	45
Gln	Gly	Leu	Gln	Ala	Val	Pro	Val	Gly	Ile	Pro	Ala	Ala	Ser	Gln	50	55	60
Arg	Ile	Phe	Leu	His	Gly	Asn	Arg	Ile	Ser	His	Val	Pro	Ala	Ala	65	70	75
Ser	Phe	Arg	Ala	Cys	Arg	Asn	Leu	Thr	Ile	Leu	Trp	Leu	His	Ser	80	85	90
Asn	Val	Leu	Ala	Arg	Ile	Asp	Ala	Ala	Ala	Phe	Thr	Gly	Leu	Ala	95	100	105
Leu	Leu	Glu	Gln	Leu	Asp	Leu	Ser	Asp	Asn	Ala	Gln	Leu	Arg	Ser	110	115	120
Val	Asp	Pro	Ala	Thr	Phe	His	Gly	Leu	Gly	Arg	Leu	His	Thr	Leu	125	130	135
His	Leu	Asp	Arg	Cys	Gly	Leu	Gln	Glu	Leu	Gly	Pro	Gly	Leu	Phe	140	145	150
Arg	Gly	Leu	Ala	Ala	Leu	Gln	Tyr	Leu	Tyr	Leu	Gln	Asp	Asn	Ala	155	160	165
Leu	Gln	Ala	Leu	Pro	Asp	Asp	Thr	Phe	Arg	Asp	Leu	Gly	Asn	Leu	170	175	180
Thr	His	Leu	Phe	Leu	His	Gly	Asn	Arg	Ile	Ser	Ser	Val	Pro	Glu	185	190	195
Arg	Ala	Phe	Arg	Gly	Leu	His	Ser	Leu	Asp	Arg	Leu	Leu	Leu	His	200	205	210
Gln	Asn	Arg	Val	Ala	His	Val	His	Pro	His	Ala	Phe	Arg	Asp	Leu	215	220	225
Gly	Arg	Leu	Met	Thr	Leu	Tyr	Leu	Phe	Ala	Asn	Asn	Leu	Ser	Ala	230	235	240
Leu	Pro	Thr	Glu	Ala	Leu	Ala	Pro	Leu	Arg	Ala	Leu	Gln	Tyr	Leu	245	250	255
Arg	Leu	Asn	Asp	Asn	Pro	Trp	Val	Cys	Asp	Cys	Arg	Ala	Arg	Pro	260	265	270
Leu	Trp	Ala	Trp	Leu	Gln	Lys	Phe	Arg	Gly	Ser	Ser	Ser	Glu	Val	275	280	285
Pro	Cys	Ser	Leu	Pro	Gln	Arg	Leu	Ala	Gly	Arg	Asp	Leu	Lys	Arg	290	295	300
Leu	Ala	Ala	Asn	Asp	Leu	Gln	Gly	Cys	Ala	Val	Ala	Thr	Gly	Pro	305	310	315
Tyr	His	Pro	Ile	Trp	Thr	Gly	Arg	Ala	Thr	Asp	Glu	Glu	Pro	Leu			

320	325	330
Gly Leu Pro Lys Cys Cys Gln Pro Asp	Ala Ala Asp Lys Ala Ser	
335	340	345
Val Leu Glu Pro Gly Arg Pro Ala Ser	Ala Gly Asn Ala Leu Lys	
350	355	360
Gly Arg Val Pro Pro Gly Asp Ser Pro	Pro Gly Asn Gly Ser Gly	
365	370	375
Pro Arg His Ile Asn Asp Ser Pro Phe	Gly Thr Leu Pro Gly Ser	
380	385	390
Ala Glu Pro Pro Leu Thr Ala Val Arg	Pro Glu Gly Ser Glu Pro	
395	400	405
Pro Gly Phe Pro Thr Ser Gly Pro Arg	Arg Arg Pro Gly Cys Ser	
410	415	420
Arg Lys Asn Arg Thr Arg Ser His Cys	Arg Leu Gly Gln Ala Gly	
425	430	435
Ser Gly Gly Gly Gly Thr Gly Asp Ser	Glu Gly Ser Gly Ala Leu	
440	445	450
Pro Ser Leu Thr Cys Ser Leu Thr Pro	Leu Gly Leu Ala Leu Val	
455	460	465
Leu Trp Thr Val Leu Gly Pro Cys		
470		

<210> 401  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 401  
 tggctgccct gcagtacctc tacc 24  
  
 <210> 402  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 402  
 ccctgcaggt cattggcagc tagg 24  
  
 <210> 403  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 403

aggcactgcc tgatgacacc ttccgcgacc tgggcaacct cacac 45

<210> 404

<211> 2738

<212> DNA

<213> Homo sapiens

<400> 404

ggaagtccac ggggagcttg gatgccaaag ggaggacggc tgggtcctct 50  
ggagaggact actcactggc atattttctga ggtatctgta gaataaccac 100  
agcctcagat actgggggact ttacagtccc acagaaccgt cctcccagga 150  
agctgaatcc agcaagaaca atggaggcca gcgggaagct catttgca 200  
caaaggcaag tccttttttc cttttctcctt ttgggcttat ctctggcggg 250  
cgcggcggaa cctagaagct attctgtggg ggaggaaact gagggcagct 300  
cctttgtcac caatttagca aaggacctgg gtctggagca gaggggaattc 350  
tccaggcggg gggttagggg tgtttccaga gggaacaaac tacatttgca 400  
gctcaatcag gagaccgagg atttgttgct aaatgagaaa ttggaccgtg 450  
aggatctgtg cggtcacaca gagccctgtg tgctacgttt ccaagtgttg 500  
ctagagagtc ccttcgagtt ttttcaagct gagctgcaag taatagacat 550  
aaacgaccac tctccagtat ttctggacaa acaaatgttg gtgaaagtat 600  
cagagagcag tcctcctggg actacgtttc ctctgaagaa tgccgaagac 650  
ttagatgtag gccaaaacaa tattgagaac tatataatca gcccacactc 700  
ctattttcgg gtcctcaccg gcaaacgcag tgatggcagg aaatacccag 750  
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ttaaactca cagcactgga tgggtggctc cgcgccagat ctggcactgc 850  
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gcgcctgaaa ctgtggttgc acttttcagt gtttcagatc ttgattcagg 1300  
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gtgcctggg aaagaaatac aaggaaattc taccttcccc aataactttg 2550  
ggttcaatat tcagtgaaca tagttgactt ttacattcca taggtatttt 2600

attttgtggc atttccatgc caatgtttat ttcccccaat ttgtgtgtat 2650  
gtaatatattgt acggattttac tcttgatttt tctcatgttc tttctccctt 2700  
tgtttttaaag tgaacattta cctttattcc tggttcctt 2738

<210> 405  
<211> 798  
<212> PRT  
<213> Homo sapiens

<400> 405  
Met Glu Ala Ser Gly Lys Leu Ile Cys Arg Gln Arg Gln Val Leu  
1 5 10 15  
Phe Ser Phe Leu Leu Leu Gly Leu Ser Leu Ala Gly Ala Ala Glu  
20 25 30  
Pro Arg Ser Tyr Ser Val Val Glu Glu Thr Glu Gly Ser Ser Phe  
35 40 45  
Val Thr Asn Leu Ala Lys Asp Leu Gly Leu Glu Gln Arg Glu Phe  
50 55 60  
Ser Arg Arg Gly Val Arg Val Val Ser Arg Gly Asn Lys Leu His  
65 70 75  
Leu Gln Leu Asn Gln Glu Thr Ala Asp Leu Leu Leu Asn Glu Lys  
80 85 90  
Leu Asp Arg Glu Asp Leu Cys Gly His Thr Glu Pro Cys Val Leu  
95 100 105  
Arg Phe Gln Val Leu Leu Glu Ser Pro Phe Glu Phe Phe Gln Ala  
110 115 120  
Glu Leu Gln Val Ile Asp Ile Asn Asp His Ser Pro Val Phe Leu  
125 130 135  
Asp Lys Gln Met Leu Val Lys Val Ser Glu Ser Ser Pro Pro Gly  
140 145 150  
Thr Thr Phe Pro Leu Lys Asn Ala Glu Asp Leu Asp Val Gly Gln  
155 160 165  
Asn Asn Ile Glu Asn Tyr Ile Ile Ser Pro Asn Ser Tyr Phe Arg  
170 175 180  
Val Leu Thr Arg Lys Arg Ser Asp Gly Arg Lys Tyr Pro Glu Leu  
185 190 195  
Val Leu Asp Lys Ala Leu Asp Arg Glu Glu Glu Ala Glu Leu Arg  
200 205 210  
Leu Thr Leu Thr Ala Leu Asp Gly Gly Ser Pro Pro Arg Ser Gly  
215 220 225  
Thr Ala Gln Val Tyr Ile Glu Val Leu Asp Val Asn Asp Asn Ala

230	235	240
Pro Glu Phe Glu Gln Pro Phe Tyr Arg	Val Gln Ile Ser Glu Asp	
245	250	255
Ser Pro Val Gly Phe Leu Val Val Lys	Val Ser Ala Thr Asp Val	
260	265	270
Asp Thr Gly Val Asn Gly Glu Ile Ser Tyr Ser Leu Phe Gln Ala		
275	280	285
Ser Glu Glu Ile Gly Lys Thr Phe Lys Ile Asn Pro Leu Thr Gly		
290	295	300
Glu Ile Glu Leu Lys Lys Gln Leu Asp Phe Glu Lys Leu Gln Ser		
305	310	315
Tyr Glu Val Asn Ile Glu Ala Arg Asp Ala Gly Thr Phe Ser Gly		
320	325	330
Lys Cys Thr Val Leu Ile Gln Val Ile Asp Val Asn Asp His Ala		
335	340	345
Pro Glu Val Thr Met Ser Ala Phe Thr Ser Pro Ile Pro Glu Asn		
350	355	360
Ala Pro Glu Thr Val Val Ala Leu Phe Ser Val Ser Asp Leu Asp		
365	370	375
Ser Gly Glu Asn Gly Lys Ile Ser Cys Ser Ile Gln Glu Asp Leu		
380	385	390
Pro Phe Leu Leu Lys Ser Ala Glu Asn Phe Tyr Thr Leu Leu Thr		
395	400	405
Glu Arg Pro Leu Asp Arg Glu Ser Arg Ala Glu Tyr Asn Ile Thr		
410	415	420
Ile Thr Val Thr Asp Leu Gly Thr Pro Met Leu Ile Thr Gln Leu		
425	430	435
Asn Met Thr Val Leu Ile Ala Asp Val Asn Asp Asn Ala Pro Ala		
440	445	450
Phe Thr Gln Thr Ser Tyr Thr Leu Phe Val Arg Glu Asn Asn Ser		
455	460	465
Pro Ala Leu His Ile Arg Ser Val Ser Ala Thr Asp Arg Asp Ser		
470	475	480
Gly Thr Asn Ala Gln Val Thr Tyr Ser Leu Leu Pro Pro Gln Asp		
485	490	495
Pro His Leu Pro Leu Thr Ser Leu Val Ser Ile Asn Ala Asp Asn		
500	505	510
Gly His Leu Phe Ala Leu Arg Ser Leu Asp Tyr Glu Ala Leu Gln		
515	520	525

Gly	Phe	Gln	Phe	Arg	Val	Gly	Ala	Ser	Asp	His	Gly	Ser	Pro	Ala	530	535	540
Leu	Ser	Ser	Glu	Ala	Leu	Val	Arg	Val	Val	Val	Leu	Asp	Ala	Asn	545	550	555
Asp	Asn	Ser	Pro	Phe	Val	Leu	Tyr	Pro	Leu	Gln	Asn	Gly	Ser	Ala	560	565	570
Pro	Cys	Thr	Glu	Leu	Val	Pro	Arg	Ala	Ala	Glu	Pro	Gly	Tyr	Leu	575	580	585
Val	Thr	Lys	Val	Val	Ala	Val	Asp	Gly	Asp	Ser	Gly	Gln	Asn	Ala	590	595	600
Trp	Leu	Ser	Tyr	Gln	Leu	Leu	Lys	Ala	Thr	Glu	Leu	Gly	Leu	Phe	605	610	615
Gly	Val	Trp	Ala	His	Asn	Gly	Glu	Val	Arg	Thr	Ala	Arg	Leu	Leu	620	625	630
Ser	Glu	Arg	Asp	Ala	Ala	Lys	His	Arg	Leu	Val	Val	Leu	Val	Lys	635	640	645
Asp	Asn	Gly	Glu	Pro	Pro	Arg	Ser	Ala	Thr	Ala	Thr	Leu	His	Val	650	655	660
Leu	Leu	Val	Asp	Gly	Phe	Ser	Gln	Pro	Tyr	Leu	Pro	Leu	Pro	Glu	665	670	675
Ala	Ala	Pro	Thr	Gln	Ala	Gln	Ala	Asp	Leu	Leu	Thr	Val	Tyr	Leu	680	685	690
Val	Val	Ala	Leu	Ala	Ser	Val	Ser	Ser	Leu	Phe	Leu	Phe	Ser	Val	695	700	705
Leu	Leu	Phe	Val	Ala	Val	Arg	Leu	Cys	Arg	Arg	Ser	Arg	Ala	Ala	710	715	720
Ser	Val	Gly	Arg	Cys	Leu	Val	Pro	Glu	Gly	Pro	Leu	Pro	Gly	His	725	730	735
Leu	Val	Asp	Met	Ser	Gly	Thr	Arg	Thr	Leu	Ser	Gln	Ser	Tyr	Gln	740	745	750
Tyr	Glu	Val	Cys	Leu	Ala	Gly	Gly	Ser	Gly	Thr	Asn	Glu	Phe	Lys	755	760	765
Phe	Leu	Lys	Pro	Ile	Ile	Pro	Asn	Phe	Pro	Pro	Gln	Cys	Pro	Gly	770	775	780
Lys	Glu	Ile	Gln	Gly	Asn	Ser	Thr	Phe	Pro	Asn	Asn	Phe	Gly	Phe	785	790	795
Asn	Ile	Gln															

<210> 406

<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 406  
ctgagaacgc gcctgaaact gtg 23

<210> 407  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 407  
agcgttgtca ttgacatcgg cg 22

<210> 408  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 408  
ttagttgctc cattcaggag gatctaccct tcctcctgaa atccgcggaa 50

<210> 409  
<211> 1379  
<212> DNA  
<213> Homo sapiens

<400> 409  
acccacgcgt ccgcccacgc gtccgcccac gcgtccgccc acgcgtccgc 50  
gcgtagccgt gcgccgattg cctctcggcc tgggcaatgg tcccggctgc 100  
cggtcgacga ccgccccgcg tcatgcggct cctcggctgg tggcaagtat 150  
tgctgtgggt gctgggactt cccgtccgcg gcgtggaggt tgcagaggaa 200  
agtggtcgct tatggtcaga ggagcagcct gctcaccctc tccaggtggg 250  
ggctgtgtac ctgggtgagg aggagctcct gcatgacccg atgggccagg 300  
acagggcagc agaagaggcc aatgcggtgc tggggctgga cacccaaggc 350  
gatcacatgg tgatgctgtc tgtgattcct ggggaagctg aggacaaaagt 400  
gagttcagag cctagcggcg tcacctgtgg tgctggagga gcggaggact 450  
caaggtgcaa cgtccgagag agccttttct ctctggatgg cgctggagca 500



cacttccctg acagagaaga ggagtattac acagagccag aagtggcgga 550  
 atctgacgca gccccgacag aggactccaa taacactgaa agtctgaaat 600  
 ccccaaaggt gaactgtgag gagagaaaca ttacaggatt agaaaatttc 650  
 actctgaaaa ttttaaatat gtcacaggac cttatggatt ttctgaaccc 700  
 aaacggtagt gactgtactc tagtcctgtt ttacacccccg tggcgccgct 750  
 tttctgccag tttggcccct cactttaact ctctgccccg ggcatttcca 800  
 gctcttcact ttttggcact ggatgcatct cagcacagca gcctttctac 850  
 caggtttggc accgtagctg ttctaataat tttattattt caaggagcta 900  
 aaccaatggc cagatttaaat catacagatc gaacactgga aacactgaaa 950  
 atcttcattt ttaatcagac aggtatagaa gccagaaga atgtggtggt 1000  
 aactcaagcc gaccaaataag gccctcttcc cagcactttg ataaaaagt 1050  
 tggactggtt gcttgattt tccttattct ttttaattag ttttattatg 1100  
 tatgctacca ttcgaactga gagtattcgg tggctaattc caggacaaga 1150  
 gcaggaacat gtggagtagt gatggtctga aagaagttgg aaagaggaac 1200  
 ttcaatcctt cgtttcagaa attagtgcta cagtttcata ctttttctcc 1250  
 agtgacgtgt tgacttgaaa cttcaggcag attaaaagaa tcatttggtg 1300  
 aacaactgaa tgtataaaaa aattataaac tgggtgttta actagtattg 1350  
 caataagcaa atgcaaaaat attcaatag 1379

<210> 410  
 <211> 360  
 <212> PRT  
 <213> Homo sapiens

<400> 410  
 Met Val Pro Ala Ala Gly Arg Arg Pro Pro Arg Val Met Arg Leu  
 1 5 10 15  
 Leu Gly Trp Trp Gln Val Leu Leu Trp Val Leu Gly Leu Pro Val  
 20 25 30  
 Arg Gly Val Glu Val Ala Glu Glu Ser Gly Arg Leu Trp Ser Glu  
 35 40 45  
 Glu Gln Pro Ala His Pro Leu Gln Val Gly Ala Val Tyr Leu Gly  
 50 55 60  
 Glu Glu Glu Leu Leu His Asp Pro Met Gly Gln Asp Arg Ala Ala  
 65 70 75  
 Glu Glu Ala Asn Ala Val Leu Gly Leu Asp Thr Gln Gly Asp His

	80		85		90
Met Val Met Leu Ser Val Ile Pro Gly Glu Ala Glu Asp Lys Val	95		100		105
Ser Ser Glu Pro Ser Gly Val Thr Cys Gly Ala Gly Gly Ala Glu	110		115		120
Asp Ser Arg Cys Asn Val Arg Glu Ser Leu Phe Ser Leu Asp Gly	125		130		135
Ala Gly Ala His Phe Pro Asp Arg Glu Glu Glu Tyr Tyr Thr Glu	140		145		150
Pro Glu Val Ala Glu Ser Asp Ala Ala Pro Thr Glu Asp Ser Asn	155		160		165
Asn Thr Glu Ser Leu Lys Ser Pro Lys Val Asn Cys Glu Glu Arg	170		175		180
Asn Ile Thr Gly Leu Glu Asn Phe Thr Leu Lys Ile Leu Asn Met	185		190		195
Ser Gln Asp Leu Met Asp Phe Leu Asn Pro Asn Gly Ser Asp Cys	200		205		210
Thr Leu Val Leu Phe Tyr Thr Pro Trp Cys Arg Phe Ser Ala Ser	215		220		225
Leu Ala Pro His Phe Asn Ser Leu Pro Arg Ala Phe Pro Ala Leu	230		235		240
His Phe Leu Ala Leu Asp Ala Ser Gln His Ser Ser Leu Ser Thr	245		250		255
Arg Phe Gly Thr Val Ala Val Pro Asn Ile Leu Leu Phe Gln Gly	260		265		270
Ala Lys Pro Met Ala Arg Phe Asn His Thr Asp Arg Thr Leu Glu	275		280		285
Thr Leu Lys Ile Phe Ile Phe Asn Gln Thr Gly Ile Glu Ala Lys	290		295		300
Lys Asn Val Val Val Thr Gln Ala Asp Gln Ile Gly Pro Leu Pro	305		310		315
Ser Thr Leu Ile Lys Ser Val Asp Trp Leu Leu Val Phe Ser Leu	320		325		330
Phe Phe Leu Ile Ser Phe Ile Met Tyr Ala Thr Ile Arg Thr Glu	335		340		345
Ser Ile Arg Trp Leu Ile Pro Gly Gln Glu Gln Glu His Val Glu	350		355		360

<210> 411

<211> 24

<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe

<400> 411  
cacagagcca gaagtggcgg aatc 24

<210> 412  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 412  
ccacatgttc ctgctcttgt cctgg 25

<210> 413  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 413  
cggtagtgac tgtactctag tcctgtttta caccctgtgg tgccg 45

<210> 414  
<211> 1196  
<212> DNA  
<213> Homo sapiens

<400> 414  
cccggtccg ctccctctgc cccctcgggg tcgcgcgccc acgatgctgc 50  
agggccctgg ctgcgtgctg ctgctcttcc tcgcctcgca ctgctgcctg 100  
ggctcggcgc gcgggctctt cctctttggc cagcccgaact tctcctacaa 150  
gcgcagcaat tgcaagccca tcccggtaa cctgcagctg tgccacggca 200  
tcgaatacca gaacatgcgg ctgcccaccc tgctggggcca cgagaccatg 250  
aaggaggtgc tggagcaggc cggcgcttgg atcccgtgg tcatgaagca 300  
gtgccacccg gacaccaaga agttcctgtg ctgcgtcttc gccccgtct 350  
gcctcgatga cctagacgag accatccagc catgccactc gctctgcgtg 400  
caggtgaagg accgctgcgc cccgggtcatg tccgccttcg gcttcccctg 450  
gcccgcacatg cttgagtgcg accgtttccc ccaggacaac gacctttgca 500  
tccccctcgc tagcagcgac cacctcctgc cagccaccga ggaagctcca 550

aaggtatgtg aagcctgcaa aaataaaaat gatgatgaca acgacataat 600  
ggaaacgctt tgtaaaaatg attttgcact gaaaataaaa gtgaaggaga 650  
taacctacat caaccgagat accaaaatca tcctggagac caagagcaag 700  
accatttaca agctgaacgg tgtgtccgaa agggacctga agaaatcggt 750  
gctgtggctc aaagacagct tgcagtgcac ctgtgaggag atgaacgaca 800  
tcaacgcgcc ctatctgggtc atgggacaga aacaggggtgg ggagctgggtg 850  
atcacctcgg tgaagcgggtg gcagaagggg cagagagagt tcaagcgcac 900  
ctcccgagc atccgcaagc tgcagtgcta gtcccgcat cctgatggct 950  
ccgacaggcc tgctccagag cacggctgac catttctgct ccgggatctc 1000  
agctcccggt cccaagcac actcctagct gctccagtct cagcctgggc 1050  
agcttcccc tgcttttgc acgtttgcat cccagcatt tcctgagtta 1100  
taaggccaca ggagtggata gctgttttca cctaaaggaa aagcccaccc 1150  
gaatcttgta gaaatattca aactaataaa atcatgaata ttttaa 1196

<210> 415  
<211> 295  
<212> PRT  
<213> Homo sapiens

<400> 415  
Met Leu Gln Gly Pro Gly Ser Leu Leu Leu Leu Phe Leu Ala Ser  
1 5 10 15  
His Cys Cys Leu Gly Ser Ala Arg Gly Leu Phe Leu Phe Gly Gln  
20 25 30  
Pro Asp Phe Ser Tyr Lys Arg Ser Asn Cys Lys Pro Ile Pro Val  
35 40 45  
Asn Leu Gln Leu Cys His Gly Ile Glu Tyr Gln Asn Met Arg Leu  
50 55 60  
Pro Asn Leu Leu Gly His Glu Thr Met Lys Glu Val Leu Glu Gln  
65 70 75  
Ala Gly Ala Trp Ile Pro Leu Val Met Lys Gln Cys His Pro Asp  
80 85 90  
Thr Lys Lys Phe Leu Cys Ser Leu Phe Ala Pro Val Cys Leu Asp  
95 100 105  
Asp Leu Asp Glu Thr Ile Gln Pro Cys His Ser Leu Cys Val Gln  
110 115 120  
Val Lys Asp Arg Cys Ala Pro Val Met Ser Ala Phe Gly Phe Pro  
125 130 135

Trp	Pro	Asp	Met	Leu	Glu	Cys	Asp	Arg	Phe	Pro	Gln	Asp	Asn	Asp	140	145	150
Leu	Cys	Ile	Pro	Leu	Ala	Ser	Ser	Asp	His	Leu	Leu	Pro	Ala	Thr	155	160	165
Glu	Glu	Ala	Pro	Lys	Val	Cys	Glu	Ala	Cys	Lys	Asn	Lys	Asn	Asp	170	175	180
Asp	Asp	Asn	Asp	Ile	Met	Glu	Thr	Leu	Cys	Lys	Asn	Asp	Phe	Ala	185	190	195
Leu	Lys	Ile	Lys	Val	Lys	Glu	Ile	Thr	Tyr	Ile	Asn	Arg	Asp	Thr	200	205	210
Lys	Ile	Ile	Leu	Glu	Thr	Lys	Ser	Lys	Thr	Ile	Tyr	Lys	Leu	Asn	215	220	225
Gly	Val	Ser	Glu	Arg	Asp	Leu	Lys	Lys	Ser	Val	Leu	Trp	Leu	Lys	230	235	240
Asp	Ser	Leu	Gln	Cys	Thr	Cys	Glu	Glu	Met	Asn	Asp	Ile	Asn	Ala	245	250	255
Pro	Tyr	Leu	Val	Met	Gly	Gln	Lys	Gln	Gly	Gly	Glu	Leu	Val	Ile	260	265	270
Thr	Ser	Val	Lys	Arg	Trp	Gln	Lys	Gly	Gln	Arg	Glu	Phe	Lys	Arg	275	280	285
Ile	Ser	Arg	Ser	Ile	Arg	Lys	Leu	Gln	Cys						290	295	

<210> 416  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 416  
 cctggctcgc tgctgctgct c 21  
  
 <210> 417  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 417  
 cctcacaggt gcactgcaag ctgtc 25  
  
 <210> 418  
 <211> 47  
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 418

ctcttcctct ttggccagcc cgacttctcc tacaagcgca gaattgc 47

<210> 419

<211> 1830

<212> DNA

<213> Homo sapiens

<400> 419

gtggaggccg ccgacgatgg cggggccgac ggaggccgag acggggttgg 50

ccgagccccg ggccctgtgc gcgcagcggg gccaccgcac ctacgcgcgc 100

cgctgggtgt tctgtctcgc gatcagcctg ctcaactgct ccaacgccac 150

gctgtggctc agctttgcac ctgtggctga cgtcattgct gaggacttgg 200

tctgtccat ggagcagatc aactggctgt cactggtcta cctcgtggta 250

tccaccccat ttggcgtggc ggccatctgg atcctggact ccgtcgggct 300

ccgtgcggcg accatcctgg gtgcgtggct gaactttgcc gggagtgtgc 350

tacgcatggt gccctgcag gttgttggga cccaaaacc atttgccttc 400

ctcatgggtg gccagagcct ctgtgccctt gccagagcc tggatcatctt 450

ctctccagcc aagctggctg ccttgtgggt cccagagcac cagcgagcca 500

cggccaacat gctcgccacc atgtcgaacc ctctgggctg ccttgtggcc 550

aatgtgctgt cccctgtgct ggtcaagaag ggtgaggaca ttccgttaat 600

gctcgggtgc tataccatcc ctgctggcgt cgtctgcctg ctgtccacca 650

tctgcctgtg ggagagtgtg cccccaccc cgccctctgc cggggctgcc 700

agctccacct cagagaagtt cctggatggg ctcaagctgc agctcatgtg 750

gaacaaggcc tatgtcatcc tggctgtgtg cttgggggga atgatcggga 800

tctctgccag cttctcagcc ctctggagc agatcctctg tgcaagcggc 850

cactccagtg ggttttccgg cctctgtggc gctctcttca tcacgtttgg 900

gatcctgggg gcactggctc tcggccccta tgtggaccgg accaagcact 950

tcactgaggc caccaagatt ggctgtgcc tgttctctct ggctgcgtg 1000

ccctttgccc tgggtgccca gctgcaggga cagacccttg ccctggctgc 1050

cacctgctcg ctgctcgggc tgtttggctt ctcggtgggc cccgtggcca 1100

tggagttggc ggtcgagtgt tccttccccg tgggggaggg ggctgccaca 1150  
 ggcatgatct ttgtgctggg gcaggccgag ggaataactca tcatgctggc 1200  
 aatgacggca ctgactgtgc gacgctcgga gccgtccttg tccacctgcc 1250  
 agcaggggga ggatccactt gactggacag tgtctctgct gctgatggcc 1300  
 ggctgtgca ccttcttcag ctgcatectg gcggtcttct tccacacccc 1350  
 ataccggcgc ctgcaggccg agtctgggga gccccctcc acccgtaacg 1400  
 ccgtgggcgg cgcagactca gggccgggtg tggaccgagg gggagcagga 1450  
 agggctgggg tcctggggcc cagcacggcg actccggagt gcacggcgag 1500  
 gggggcctcg ctagaggacc ccagagggcc cgggagcccc caccagcct 1550  
 gccaccgagc gactccccgt gcgcaaggcc cagcagccac cgacgcgccc 1600  
 tcccgcctcg gcagactcgc aggcagggtc caagcgtcca ggtttattga 1650  
 cccggctggg tctcactcct ccttctctc cccgtgggtg atcacgtagc 1700  
 tgagcgcctt gtagtccagg ttgcccacca catcgatgga ggcgaaactgg 1750  
 aacatctggt ccacctgcgg gcggggggcga aagggtcctt tgcgggctcc 1800  
 gggagcgaat tacaagcgcg cacctgaaaa 1830

<210> 420

<211> 560

<212> PRT

<213> Homo sapiens

<400> 420

Met	Ala	Gly	Pro	Thr	Glu	Ala	Glu	Thr	Gly	Leu	Ala	Glu	Pro	Arg
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Ala	Leu	Cys	Ala	Gln	Arg	Gly	His	Arg	Thr	Tyr	Ala	Arg	Arg	Trp
				20					25					30
Val	Phe	Leu	Leu	Ala	Ile	Ser	Leu	Leu	Asn	Cys	Ser	Asn	Ala	Thr
				35					40					45
Leu	Trp	Leu	Ser	Phe	Ala	Pro	Val	Ala	Asp	Val	Ile	Ala	Glu	Asp
				50					55					60
Leu	Val	Leu	Ser	Met	Glu	Gln	Ile	Asn	Trp	Leu	Ser	Leu	Val	Tyr
				65					70					75
Leu	Val	Val	Ser	Thr	Pro	Phe	Gly	Val	Ala	Ala	Ile	Trp	Ile	Leu
				80					85					90
Asp	Ser	Val	Gly	Leu	Arg	Ala	Ala	Thr	Ile	Leu	Gly	Ala	Trp	Leu
				95					100					105
Asn	Phe	Ala	Gly	Ser	Val	Leu	Arg	Met	Val	Pro	Cys	Met	Val	Val

	110		115		120
Gly Thr Gln Asn	Pro Phe Ala Phe Leu Met	Gly Gly Gln Ser	Leu		
	125		130		135
Cys Ala Leu Ala	Gln Ser Leu Val Ile	Phe Ser Pro Ala Lys	Leu		
	140		145		150
Ala Ala Leu Trp	Phe Pro Glu His Gln Arg	Ala Thr Ala Asn	Met		
	155		160		165
Leu Ala Thr Met	Ser Asn Pro Leu Gly	Val Leu Val Ala Asn	Val		
	170		175		180
Leu Ser Pro Val	Leu Val Lys Lys Gly	Glu Asp Ile Pro Leu	Met		
	185		190		195
Leu Gly Val Tyr	Thr Ile Pro Ala Gly	Val Val Cys Leu Leu	Ser		
	200		205		210
Thr Ile Cys Leu	Trp Glu Ser Val Pro	Pro Thr Pro Pro Ser	Ala		
	215		220		225
Gly Ala Ala Ser	Ser Thr Ser Glu Lys	Phe Leu Asp Gly Leu	Lys		
	230		235		240
Leu Gln Leu Met	Trp Asn Lys Ala Tyr	Val Ile Leu Ala Val	Cys		
	245		250		255
Leu Gly Gly Met	Ile Gly Ile Ser Ala	Ser Phe Ser Ala Leu	Leu		
	260		265		270
Glu Gln Ile Leu	Cys Ala Ser Gly His	Ser Ser Gly Phe Ser	Gly		
	275		280		285
Leu Cys Gly Ala	Leu Phe Ile Thr Phe	Gly Ile Leu Gly Ala	Leu		
	290		295		300
Ala Leu Gly Pro	Tyr Val Asp Arg Thr	Lys His Phe Thr Glu	Ala		
	305		310		315
Thr Lys Ile Gly	Leu Cys Leu Phe Ser	Leu Ala Cys Val Pro	Phe		
	320		325		330
Ala Leu Val Ser	Gln Leu Gln Gly Gln	Thr Leu Ala Leu Ala	Ala		
	335		340		345
Thr Cys Ser Leu	Leu Gly Leu Phe Gly	Phe Ser Val Gly Pro	Val		
	350		355		360
Ala Met Glu Leu	Ala Val Glu Cys Ser	Phe Pro Val Gly Glu	Gly		
	365		370		375
Ala Ala Thr Gly	Met Ile Phe Val Leu	Gly Gln Ala Glu Gly	Ile		
	380		385		390
Leu Ile Met Leu	Ala Met Thr Ala Leu	Thr Val Arg Arg Ser	Glu		
	395		400		405



Pro	Ser	Leu	Ser	Thr	Cys	Gln	Gln	Gly	Glu	Asp	Pro	Leu	Asp	Trp
				410					415					420
Thr	Val	Ser	Leu	Leu	Leu	Met	Ala	Gly	Leu	Cys	Thr	Phe	Phe	Ser
				425					430					435
Cys	Ile	Leu	Ala	Val	Phe	Phe	His	Thr	Pro	Tyr	Arg	Arg	Leu	Gln
				440					445					450
Ala	Glu	Ser	Gly	Glu	Pro	Pro	Ser	Thr	Arg	Asn	Ala	Val	Gly	Gly
				455					460					465
Ala	Asp	Ser	Gly	Pro	Gly	Val	Asp	Arg	Gly	Gly	Ala	Gly	Arg	Ala
				470					475					480
Gly	Val	Leu	Gly	Pro	Ser	Thr	Ala	Thr	Pro	Glu	Cys	Thr	Ala	Arg
				485					490					495
Gly	Ala	Ser	Leu	Glu	Asp	Pro	Arg	Gly	Pro	Gly	Ser	Pro	His	Pro
				500					505					510
Ala	Cys	His	Arg	Ala	Thr	Pro	Arg	Ala	Gln	Gly	Pro	Ala	Ala	Thr
				515					520					525
Asp	Ala	Pro	Ser	Arg	Pro	Gly	Arg	Leu	Ala	Gly	Arg	Val	Gln	Ala
				530					535					540
Ser	Arg	Phe	Ile	Asp	Pro	Ala	Gly	Ser	His	Ser	Ser	Phe	Ser	Ser
				545					550					555
Pro	Trp	Val	Ile	Thr										
				560										

<210> 421  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 421  
 agcttctcag ccctcctgga gcag 24  
  
 <210> 422  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 422  
 cgggtcaata aacctggacg cttgg 25  
  
 <210> 423  
 <211> 43  
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 423

tatgtggacc ggaccaagca cttcactgag gccaccaaga ttg 43

<210> 424

<211> 4313

<212> DNA

<213> Homo sapiens

<400> 424

gtccacatc ctgctcaact gggtcaggtc cctcttagac cagctcttgt 50

ccatcatttg ctgaagtgga ccaactagtt cccagtagg gggctctccc 100

tggcaattct tgatcgcggt ttggacatct cagatcgctt ccaatgaaga 150

tggccttgcc ttggggctct gcttgtttca taatcatcta actatgggac 200

aaggttgtgc cggcagctct gggggaagga gcacggggct gatcaagcca 250

tccaggaaac actggaggac ttgtccagcc ttgaaagaac tctagtgggt 300

tctgaatcta gcccaacttg cggtaaagcat gatgcaactt ctgcaacttc 350

tgctggggct tttggggcca ggtgggtact tatttctttt aggggattgt 400

caggaggtga ccaactctcac ggtgaaatac caagtgtcag aggaagtgcc 450

atctggtaca gtgatcggga agctgtccca ggaactgggc cgggaggaga 500

ggcggaggca agctggggcc gccttccagg tgttgacagct gcctcaggcg 550

ctccccattc aggtggactc tgaggaaggc ttgctcagca caggcaggcg 600

gctggatcga gagcagctgt gccgacagtg ggatccctgc ctggtttcct 650

ttgatgtgct tgccacaggg gatttggctc tgatccatgt ggagatccaa 700

gtgctggaca tcaatgacca ccagccacgg tttcccaaag gcgagcagga 750

gctggaaatc tctgagagcg cctctctgcg aacccggatc cccctggaca 800

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 aaaaaaaaaa aaa 4313

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 <212> PRT  
 <213> Homo sapiens

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 Thr Val Lys Tyr Gln Val Ser Glu Glu Val Pro Ser Gly Thr Val  
 35 40 45  
 Ile Gly Lys Leu Ser Gln Glu Leu Gly Arg Glu Glu Arg Arg Arg  
 50 55 60  
 Gln Ala Gly Ala Ala Phe Gln Val Leu Gln Leu Pro Gln Ala Leu  
 65 70 75  
 Pro Ile Gln Val Asp Ser Glu Glu Gly Leu Leu Ser Thr Gly Arg  
 80 85 90  
 Arg Leu Asp Arg Glu Gln Leu Cys Arg Gln Trp Asp Pro Cys Leu  
 95 100 105  
 Val Ser Phe Asp Val Leu Ala Thr Gly Asp Leu Ala Leu Ile His  
 110 115 120  
 Val Glu Ile Gln Val Leu Asp Ile Asn Asp His Gln Pro Arg Phe  
 125 130 135  
 Pro Lys Gly Glu Gln Glu Leu Glu Ile Ser Glu Ser Ala Ser Leu  
 140 145 150  
 Arg Thr Arg Ile Pro Leu Asp Arg Ala Leu Asp Pro Asp Thr Gly  
 155 160 165  
 Pro Asn Thr Leu His Thr Tyr Thr Leu Ser Pro Ser Glu His Phe  
 170 175 180  
 Ala Leu Asp Val Ile Val Gly Pro Asp Glu Thr Lys His Ala Glu  
 185 190 195

Leu	Ile	Val	Val	Lys	Glu	Leu	Asp	Arg	Glu	Ile	His	Ser	Phe	Phe	200	205	210
Asp	Leu	Val	Leu	Thr	Ala	Tyr	Asp	Asn	Gly	Asn	Pro	Pro	Lys	Ser	215	220	225
Gly	Thr	Ser	Leu	Val	Lys	Val	Asn	Val	Leu	Asp	Ser	Asn	Asp	Asn	230	235	240
Ser	Pro	Ala	Phe	Ala	Glu	Ser	Ser	Leu	Ala	Leu	Glu	Ile	Gln	Glu	245	250	255
Asp	Ala	Ala	Pro	Gly	Thr	Leu	Leu	Ile	Lys	Leu	Thr	Ala	Thr	Asp	260	265	270
Pro	Asp	Gln	Gly	Pro	Asn	Gly	Glu	Val	Glu	Phe	Phe	Leu	Ser	Lys	275	280	285
His	Met	Pro	Pro	Glu	Val	Leu	Asp	Thr	Phe	Ser	Ile	Asp	Ala	Lys	290	295	300
Thr	Gly	Gln	Val	Ile	Leu	Arg	Arg	Pro	Leu	Asp	Tyr	Glu	Lys	Asn	305	310	315
Pro	Ala	Tyr	Glu	Val	Asp	Val	Gln	Ala	Arg	Asp	Leu	Gly	Pro	Asn	320	325	330
Pro	Ile	Pro	Ala	His	Cys	Lys	Val	Leu	Ile	Lys	Val	Leu	Asp	Val	335	340	345
Asn	Asp	Asn	Ile	Pro	Ser	Ile	His	Val	Thr	Trp	Ala	Ser	Gln	Pro	350	355	360
Ser	Leu	Val	Ser	Glu	Ala	Leu	Pro	Lys	Asp	Ser	Phe	Ile	Ala	Leu	365	370	375
Val	Met	Ala	Asp	Asp	Leu	Asp	Ser	Gly	His	Asn	Gly	Leu	Val	His	380	385	390
Cys	Trp	Leu	Ser	Gln	Glu	Leu	Gly	His	Phe	Arg	Leu	Lys	Arg	Thr	395	400	405
Asn	Gly	Asn	Thr	Tyr	Met	Leu	Leu	Thr	Asn	Ala	Thr	Leu	Asp	Arg	410	415	420
Glu	Gln	Trp	Pro	Lys	Tyr	Thr	Leu	Thr	Leu	Leu	Ala	Gln	Asp	Gln	425	430	435
Gly	Leu	Gln	Pro	Leu	Ser	Ala	Lys	Lys	Gln	Leu	Ser	Ile	Gln	Ile	440	445	450
Ser	Asp	Ile	Asn	Asp	Asn	Ala	Pro	Val	Phe	Glu	Lys	Ser	Arg	Tyr	455	460	465
Glu	Val	Ser	Thr	Arg	Glu	Asn	Asn	Leu	Pro	Ser	Leu	His	Leu	Ile	470	475	480
Thr	Ile	Lys	Ala	His	Asp	Ala	Asp	Leu	Gly	Ile	Asn	Gly	Lys	Val			

	485	490	495
Ser Tyr Arg Ile	Gln Asp Ser Pro Val	Ala His Leu Val	Ala Ile
	500	505	510
Asp Ser Asn Thr	Gly Glu Val Thr Ala	Gln Arg Ser Leu Asn	Tyr
	515	520	525
Glu Glu Met Ala	Gly Phe Glu Phe Gln	Val Ile Ala Glu Asp	Ser
	530	535	540
Gly Gln Pro Met	Leu Ala Ser Ser Val	Ser Val Trp Val	Ser Leu
	545	550	555
Leu Asp Ala Asn	Asp Asn Ala Pro Glu	Val Val Gln Pro Val	Leu
	560	565	570
Ser Asp Gly Lys	Ala Ser Leu Ser Val	Leu Val Asn Ala Ser	Thr
	575	580	585
Gly His Leu Leu	Val Pro Ile Glu Thr	Pro Asn Gly Leu Gly	Pro
	590	595	600
Ala Gly Thr Asp	Thr Pro Pro Leu Ala	Thr His Ser Ser Arg	Pro
	605	610	615
Phe Leu Leu Thr	Thr Ile Val Ala Arg	Asp Ala Asp Ser Gly	Ala
	620	625	630
Asn Gly Glu Pro	Leu Tyr Ser Ile Arg	Asn Gly Asn Glu Ala	His
	635	640	645
Leu Phe Ile Leu	Asn Pro His Thr Gly	Gln Leu Phe Val Asn	Val
	650	655	660
Thr Asn Ala Ser	Ser Leu Ile Gly Ser	Glu Trp Glu Leu Glu	Ile
	665	670	675
Val Val Glu Asp	Gln Gly Ser Pro Pro	Leu Gln Thr Arg Ala	Leu
	680	685	690
Leu Arg Val Met	Phe Val Thr Ser Val	Asp His Leu Arg Asp	Ser
	695	700	705
Ala Arg Lys Pro	Gly Ala Leu Ser Met	Ser Met Leu Thr Val	Ile
	710	715	720
Cys Leu Ala Val	Leu Leu Gly Ile Phe	Gly Leu Ile Leu Ala	Leu
	725	730	735
Phe Met Ser Ile	Cys Arg Thr Glu Lys	Lys Asp Asn Arg Ala	Tyr
	740	745	750
Asn Cys Arg Glu	Ala Glu Ser Thr Tyr	Arg Gln Gln Pro Lys	Arg
	755	760	765
Pro Gln Lys His	Ile Gln Lys Ala Asp	Ile His Leu Val Pro	Val
	770	775	780

Leu	Arg	Gly	Gln	Ala	Gly	Glu	Pro	Cys	Glu	Val	Gly	Gln	Ser	His
				785					790					795
Lys	Asp	Val	Asp	Lys	Glu	Ala	Met	Met	Glu	Ala	Gly	Trp	Asp	Pro
				800					805					810
Cys	Leu	Gln	Ala	Pro	Phe	His	Leu	Thr	Pro	Thr	Leu	Tyr	Arg	Thr
				815					820					825
Leu	Arg	Asn	Gln	Gly	Asn	Gln	Gly	Ala	Pro	Ala	Glu	Ser	Arg	Glu
				830					835					840
Val	Leu	Gln	Asp	Thr	Val	Asn	Leu	Leu	Phe	Asn	His	Pro	Arg	Gln
				845					850					855
Arg	Asn	Ala	Ser	Arg	Glu	Asn	Leu	Asn	Leu	Pro	Glu	Pro	Gln	Pro
				860					865					870
Ala	Thr	Gly	Gln	Pro	Arg	Ser	Arg	Pro	Leu	Lys	Val	Ala	Gly	Ser
				875					880					885
Pro	Thr	Gly	Arg	Leu	Ala	Gly	Asp	Gln	Gly	Ser	Glu	Glu	Ala	Pro
				890					895					900
Gln	Arg	Pro	Pro	Ala	Ser	Ser	Ala	Thr	Leu	Arg	Arg	Gln	Arg	His
				905					910					915
Leu	Asn	Gly	Lys	Val	Ser	Pro	Glu	Lys	Glu	Ser	Gly	Pro	Arg	Gln
				920					925					930
Ile	Leu	Arg	Ser	Leu	Val	Arg	Leu	Ser	Val	Ala	Ala	Phe	Ala	Glu
				935					940					945
Arg	Asn	Pro	Val	Glu	Glu	Leu	Thr	Val	Asp	Ser	Pro	Pro	Val	Gln
				950					955					960
Gln	Ile	Ser	Gln	Leu	Leu	Ser	Leu	Leu	His	Gln	Gly	Gln	Phe	Gln
				965					970					975
Pro	Lys	Pro	Asn	His	Arg	Gly	Asn	Lys	Tyr	Leu	Ala	Lys	Pro	Gly
				980					985					990
Gly	Ser	Arg	Ser	Ala	Ile	Pro	Asp	Thr	Asp	Gly	Pro	Ser	Ala	Arg
				995					1000					1005
Ala	Gly	Gly	Gln	Thr	Asp	Pro	Glu	Gln	Glu	Glu	Gly	Pro	Leu	Asp
				1010					1015					1020
Pro	Glu	Glu	Asp	Leu	Ser	Val	Lys	Gln	Leu	Leu	Glu	Glu	Glu	Leu
				1025					1030					1035
Ser	Ser	Leu	Leu	Asp	Pro	Ser	Thr	Gly	Leu	Ala	Leu	Asp	Arg	Leu
				1040					1045					1050
Ser	Ala	Pro	Asp	Pro	Ala	Trp	Met	Ala	Arg	Leu	Ser	Leu	Pro	Leu
				1055					1060					1065
Thr	Thr	Asn	Tyr	Arg	Asp	Asn	Val	Ile	Ser	Pro	Asp	Ala	Ala	Ala



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Thr Glu Glu Pro Arg Thr Phe Gln Thr Phe Gly Lys Ala Glu Ala		
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Pro Glu Leu Ser Pro Thr Gly Thr Arg Leu Ala Ser Thr Phe Val		
1100	1105	1110
Ser Glu Met Ser Ser Leu Leu Glu Met Leu Leu Glu Gln Arg Ser		
1115	1120	1125
Ser Met Pro Val Glu Ala Ala Ser Glu Ala Leu Arg Arg Leu Ser		
1130	1135	1140
Val Cys Gly Arg Thr Leu Ser Leu Asp Leu Ala Thr Ser Ala Ala		
1145	1150	1155
Ser Gly Met Lys Val Gln Gly Asp Pro Gly Gly Lys Thr Gly Thr		
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 <223> Synthetic oligonucleotide probe

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<400> 427  
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<210> 428  
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 <212> DNA  
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<212> DNA

<213> Homo sapiens

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 ccgccatggc ccaacttggt tattgcagct tataatg 2037

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 Lys Asp Tyr Glu Ile Arg Gln Tyr Val Val Gln Val Ile Phe Ser  
 35 40 45  
 Val Thr Phe Ala Phe Ser Cys Thr Met Phe Glu Leu Ile Ile Phe  
 50 55 60  
 Glu Ile Leu Gly Val Leu Asn Ser Ser Ser Arg Tyr Phe His Trp  
 65 70 75  
 Lys Met Asn Leu Cys Val Ile Leu Leu Ile Leu Val Phe Met Val  
 80 85 90  
 Pro Phe Tyr Ile Gly Tyr Phe Ile Val Ser Asn Ile Arg Leu Leu  
 95 100 105  
 His Lys Gln Arg Leu Leu Phe Ser Cys Leu Leu Trp Leu Thr Phe  
 110 115 120

Met	Tyr	Phe	Phe	Trp	Lys	Leu	Gly	Asp	Pro	Phe	Pro	Ile	Leu	Ser	125	130	135
Pro	Lys	His	Gly	Ile	Leu	Ser	Ile	Glu	Gln	Leu	Ile	Ser	Arg	Val	140	145	150
Gly	Val	Ile	Gly	Val	Thr	Leu	Met	Ala	Leu	Leu	Ser	Gly	Phe	Gly	155	160	165
Ala	Val	Asn	Cys	Pro	Tyr	Thr	Tyr	Met	Ser	Tyr	Phe	Leu	Arg	Asn	170	175	180
Val	Thr	Asp	Thr	Asp	Ile	Leu	Ala	Leu	Glu	Arg	Arg	Leu	Leu	Gln	185	190	195
Thr	Met	Asp	Met	Ile	Ile	Ser	Lys	Lys	Lys	Arg	Met	Ala	Met	Ala	200	205	210
Arg	Arg	Thr	Met	Phe	Gln	Lys	Gly	Glu	Val	His	Asn	Lys	Pro	Ser	215	220	225
Gly	Phe	Trp	Gly	Met	Ile	Lys	Ser	Val	Thr	Thr	Ser	Ala	Ser	Gly	230	235	240
Ser	Glu	Asn	Leu	Thr	Leu	Ile	Gln	Gln	Glu	Val	Asp	Ala	Leu	Glu	245	250	255
Glu	Leu	Ser	Arg	Gln	Leu	Phe	Leu	Glu	Thr	Ala	Asp	Leu	Tyr	Ala	260	265	270
Thr	Lys	Glu	Arg	Ile	Glu	Tyr	Ser	Lys	Thr	Phe	Lys	Gly	Lys	Tyr	275	280	285
Phe	Asn	Phe	Leu	Gly	Tyr	Phe	Phe	Ser	Ile	Tyr	Cys	Val	Trp	Lys	290	295	300
Ile	Phe	Met	Ala	Thr	Ile	Asn	Ile	Val	Phe	Asp	Arg	Val	Gly	Lys	305	310	315
Thr	Asp	Pro	Val	Thr	Arg	Gly	Ile	Glu	Ile	Thr	Val	Asn	Tyr	Leu	320	325	330
Gly	Ile	Gln	Phe	Asp	Val	Lys	Phe	Trp	Ser	Gln	His	Ile	Ser	Phe	335	340	345
Ile	Leu	Val	Gly	Ile	Ile	Ile	Val	Thr	Ser	Ile	Arg	Gly	Leu	Leu	350	355	360
Ile	Thr	Leu	Thr	Lys	Phe	Phe	Tyr	Ala	Ile	Ser	Ser	Ser	Lys	Ser	365	370	375
Ser	Asn	Val	Ile	Val	Leu	Leu	Leu	Ala	Gln	Ile	Met	Gly	Met	Tyr	380	385	390
Phe	Val	Ser	Ser	Val	Leu	Leu	Ile	Arg	Met	Ser	Met	Pro	Leu	Glu	395	400	405
Tyr	Arg	Thr	Ile	Ile	Thr	Glu	Val	Leu	Gly	Glu	Leu	Gln	Phe	Asn			

410

415

420

Phe Tyr His Arg Trp Phe Asp Val Ile Phe Leu Val Ser Ala Leu  
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 440 445 450

Lys Gln Met Ala Pro  
 455

&lt;210&gt; 431

&lt;211&gt; 407

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; unsure

&lt;222&gt; 78, 81, 113, 157, 224, 297

&lt;223&gt; unknown base

&lt;400&gt; 431

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 tcgactccag catcatgatt acctcccnga nactatTTTT tggatttggg 100  
 tggcttttct tcngcgccaa tgtttaaaga ctatgagata cgtcagtatg 150  
 ttgtacnggt gatcttctcc gtgacgtttg ccatttcttg caccatgttt 200  
 gagctcatca tctttgaaat cttnggagta ttgaatagca gctcccgta 250  
 ttttactgg aaaatgaacc tgtgtgtaat tctgctgac ctggttntca 300  
 tgggtgccttt ttacattggc tattttattg tgagcaatat ccgactactg 350  
 cataaacaac gactgctttt ttcctgtctc ttatggctga cctttatgta 400  
 tttccag 407

&lt;210&gt; 432

&lt;211&gt; 457

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; unsure

&lt;222&gt; 31, 66, 81-82, 84, 122, 184, 187, 232, 241, 400, 424, 427, 434

&lt;223&gt; unknown base

&lt;400&gt; 432

gtgttgccct tggggagggg aaggggagcc nggccctttc ctaaaatttg 50  
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 tatttttttg atttggggta gntttttttc atgcgccaat tgtttaaaga 150  
 ctatgagata cgtcagtatg ttgtacaggt gatnttntcc gtgacgtttg 200

cattttcttg caccatgttt gagctcatca tntttgaaat nttaggagta 250  
 ttgaatagca gctcccgtta ttttcactgg aaaatgaacc tgtgtgtaat 300  
 tctgctgac ctggttttca tgggtgccttt ttacattggc tattttattg 350  
 tgagcaatat ccgactactg cataaacaac gactgctttt ttctgtctn 400  
 ttatggctga cctttatgta tttnttntgg aaantaggag atccctttcc 450  
 cattctc 457

<210> 433  
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 <213> Artificial Sequence

<220>  
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<210> 434  
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<220>  
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<400> 434  
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<210> 435  
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<220>  
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<400> 435  
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<210> 436  
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 <213> Homo sapiens

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 ttctcacggg ctgtcgcctt caatctggac gtgatgggtg ccttgcgcaa 150  
 ggagggcgag ccaggcagcc tcttcggctt ctctgtggcc ctgcaccggc 200

00000000000000000000000000000000

tccccgtgtg acgttccctga gccgtaacct ggaagaaccc aagcaccagg 1700  
 cctcggggcac cgtgtggctg aagcaccagc atgaccgagt ctgtggagac 1750  
 gccatgttcc agctccagga aaatgtcaaa gacaagcttc gggccattgt 1800  
 agtgaccttg tccctacagtc tccagacccc tcggctccgg cgacaggctc 1850  
 ctggccaggg gctgcctcca gtggccccc tctcaatgc ccaccagccc 1900  
 agcaccagc gggcagagat ccacttccctg aagcaaggct gtggtgaaga 1950  
 caagatctgc cagagcaatc tgcagctggc ccacgcccgc ttctgtaccc 2000  
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 ggtcaccaac ctgccatcgg acccagccca gcccaggct gatggggatg 2150  
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 gtcggggagg aggttgtgtc actgactcag gctgctcctt ctctagtttc 3850  
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 ttcgtctatt tattaaaaa tatttgagaa caaaaaaaaa aaaaaaaaaa 3950

a 3951

<210> 437  
 <211> 1141  
 <212> PRT  
 <213> Homo sapiens

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 20 25 30  
 Ala Val Ala Phe Asn Leu Asp Val Met Gly Ala Leu Arg Lys Glu  
 35 40 45  
 Gly Glu Pro Gly Ser Leu Phe Gly Phe Ser Val Ala Leu His Arg  
 50 55 60  
 Gln Leu Gln Pro Arg Pro Gln Ser Trp Leu Leu Val Gly Ala Pro  
 65 70 75  
 Gln Ala Leu Ala Leu Pro Gly Gln Gln Ala Asn Arg Thr Gly Gly



Arg	Leu	Cys	Gly	Ser	Pro	Asp	Ser	Met	Phe	Gly	Ile	Ser	Leu	Ala	380	385	390
Val	Leu	Gly	Asp	Leu	Asn	Gln	Asp	Gly	Phe	Pro	Asp	Ile	Ala	Val	395	400	405
Gly	Ala	Pro	Phe	Asp	Gly	Asp	Gly	Lys	Val	Phe	Ile	Tyr	His	Gly	410	415	420
Ser	Ser	Leu	Gly	Val	Val	Ala	Lys	Pro	Ser	Gln	Val	Leu	Glu	Gly	425	430	435
Glu	Ala	Val	Gly	Ile	Lys	Ser	Phe	Gly	Tyr	Ser	Leu	Ser	Gly	Ser	440	445	450
Leu	Asp	Met	Asp	Gly	Asn	Gln	Tyr	Pro	Asp	Leu	Leu	Val	Gly	Ser	455	460	465
Leu	Ala	Asp	Thr	Ala	Val	Leu	Phe	Arg	Ala	Arg	Pro	Ile	Leu	His	470	475	480
Val	Ser	His	Glu	Val	Ser	Ile	Ala	Pro	Arg	Ser	Ile	Asp	Leu	Glu	485	490	495
Gln	Pro	Asn	Cys	Ala	Gly	Gly	His	Ser	Val	Cys	Val	Asp	Leu	Arg	500	505	510
Val	Cys	Phe	Ser	Tyr	Ile	Ala	Val	Pro	Ser	Ser	Tyr	Ser	Pro	Thr	515	520	525
Val	Ala	Leu	Asp	Tyr	Val	Leu	Asp	Ala	Asp	Thr	Asp	Arg	Arg	Leu	530	535	540
Arg	Gly	Gln	Val	Pro	Arg	Val	Thr	Phe	Leu	Ser	Arg	Asn	Leu	Glu	545	550	555
Glu	Pro	Lys	His	Gln	Ala	Ser	Gly	Thr	Val	Trp	Leu	Lys	His	Gln	560	565	570
His	Asp	Arg	Val	Cys	Gly	Asp	Ala	Met	Phe	Gln	Leu	Gln	Glu	Asn	575	580	585
Val	Lys	Asp	Lys	Leu	Arg	Ala	Ile	Val	Val	Thr	Leu	Ser	Tyr	Ser	590	595	600
Leu	Gln	Thr	Pro	Arg	Leu	Arg	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	605	610	615
Pro	Pro	Val	Ala	Pro	Ile	Leu	Asn	Ala	His	Gln	Pro	Ser	Thr	Gln	620	625	630
Arg	Ala	Glu	Ile	His	Phe	Leu	Lys	Gln	Gly	Cys	Gly	Glu	Asp	Lys	635	640	645
Ile	Cys	Gln	Ser	Asn	Leu	Gln	Leu	Val	His	Ala	Arg	Phe	Cys	Thr	650	655	660
Arg	Val	Ser	Asp	Thr	Glu	Phe	Gln	Pro	Leu	Pro	Met	Asp	Val	Asp			

665										670					675				
Gly	Thr	Thr	Ala	Leu	Phe	Ala	Leu	Ser	Gly	Gln	Pro	Val	Ile	Gly					
680										685					690				
Leu	Glu	Leu	Met	Val	Thr	Asn	Leu	Pro	Ser	Asp	Pro	Ala	Gln	Pro					
695										700					705				
Gln	Ala	Asp	Gly	Asp	Asp	Ala	His	Glu	Ala	Gln	Leu	Leu	Val	Met					
710										715					720				
Leu	Pro	Asp	Ser	Leu	His	Tyr	Ser	Gly	Val	Arg	Ala	Leu	Asp	Pro					
725										730					735				
Ala	Glu	Lys	Pro	Leu	Cys	Leu	Ser	Asn	Glu	Asn	Ala	Ser	His	Val					
740										745					750				
Glu	Cys	Glu	Leu	Gly	Asn	Pro	Met	Lys	Arg	Gly	Ala	Gln	Val	Thr					
755										760					765				
Phe	Tyr	Leu	Ile	Leu	Ser	Thr	Ser	Gly	Ile	Ser	Ile	Glu	Thr	Thr					
770										775					780				
Glu	Leu	Glu	Val	Glu	Leu	Leu	Leu	Ala	Thr	Ile	Ser	Glu	Gln	Glu					
785										790					795				
Leu	His	Pro	Val	Ser	Ala	Arg	Ala	Arg	Val	Phe	Ile	Glu	Leu	Pro					
800										805					810				
Leu	Ser	Ile	Ala	Gly	Met	Ala	Ile	Pro	Gln	Gln	Leu	Phe	Phe	Ser					
815										820					825				
Gly	Val	Val	Arg	Gly	Glu	Arg	Ala	Met	Gln	Ser	Glu	Arg	Asp	Val					
830										835					840				
Gly	Ser	Lys	Val	Lys	Tyr	Glu	Val	Thr	Val	Ser	Asn	Gln	Gly	Gln					
845										850					855				
Ser	Leu	Arg	Thr	Leu	Gly	Ser	Ala	Phe	Leu	Asn	Ile	Met	Trp	Pro					
860										865					870				
His	Glu	Ile	Ala	Asn	Gly	Lys	Trp	Leu	Leu	Tyr	Pro	Met	Gln	Val					
875										880					885				
Glu	Leu	Glu	Gly	Gly	Gln	Gly	Pro	Gly	Gln	Lys	Gly	Leu	Cys	Ser					
890										895					900				
Pro	Arg	Pro	Asn	Ile	Leu	His	Leu	Asp	Val	Asp	Ser	Arg	Asp	Arg					
905										910					915				
Arg	Arg	Arg	Glu	Leu	Glu	Pro	Pro	Glu	Gln	Gln	Glu	Pro	Gly	Glu					
920										925					930				
Arg	Gln	Glu	Pro	Ser	Met	Ser	Trp	Trp	Pro	Val	Ser	Ser	Ala	Glu					
935										940					945				
Lys	Lys	Lys	Asn	Ile	Thr	Leu	Asp	Cys	Ala	Arg	Gly	Thr	Ala	Asn					
950										955					960				

Cys Val Val Phe Ser Cys Pro Leu Tyr Ser Phe Asp Arg Ala Ala	965	970	975
Val Leu His Val Trp Gly Arg Leu Trp Asn Ser Thr Phe Leu Glu	980	985	990
Glu Tyr Ser Ala Val Lys Ser Leu Glu Val Ile Val Arg Ala Asn	995	1000	1005
Ile Thr Val Lys Ser Ser Ile Lys Asn Leu Met Leu Arg Asp Ala	1010	1015	1020
Ser Thr Val Ile Pro Val Met Val Tyr Leu Asp Pro Met Ala Val	1025	1030	1035
Val Ala Glu Gly Val Pro Trp Trp Val Ile Leu Leu Ala Val Leu	1040	1045	1050
Ala Gly Leu Leu Val Leu Ala Leu Leu Val Leu Leu Leu Trp Lys	1055	1060	1065
Met Gly Phe Phe Lys Arg Ala Lys His Pro Glu Ala Thr Val Pro	1070	1075	1080
Gln Tyr His Ala Val Lys Ile Pro Arg Glu Asp Arg Gln Gln Phe	1085	1090	1095
Lys Glu Glu Lys Thr Gly Thr Ile Leu Arg Asn Asn Trp Gly Ser	1100	1105	1110
Pro Arg Arg Glu Gly Pro Asp Ala His Pro Ile Leu Ala Ala Asp	1115	1120	1125
Gly His Pro Glu Leu Gly Pro Asp Gly His Pro Gly Pro Gly Thr	1130	1135	1140
Ala			

<210> 438

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 438

ggctgacacc gcagtgcctc tcag 24

<210> 439

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 439  
gctgctgggg actgcaatgt agct 24

<210> 440  
<211> 46  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 440  
catcctccat gtctcccatg aggtctctat tgctccacga agcatc 46

<210> 441  
<211> 1964  
<212> DNA  
<213> Homo sapiens

<400> 441  
cgcgccgggc gcagggagct gagtggacgg ctcgagacgg cggcgcggtgc 50  
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ggagctgcga gcacagtgtt ggctcacaac aagatgctca aggtgtcagc 150  
cgtactgtgt gtgtgtgcag ccgcttggtg cagtcagtct ctcgcagctg 200  
ccgcgccggt ggctgcagcc ggggggagggt cggacggcgg taattttctg 250  
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acagtggaac aaattccgag acgaagtaga ggatgattat ttccgcactt 350  
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gtggaagtca aaacaagaag acaaaaaacat tgctgaggcc tgagagaagc 850  
agattcgata ccagcatctt gccaatgtgc aaggactcac ttggctggat 900  
gtttaacaga cttgatacaa actatgacct gctattggac cagtcagagc 950

tcagaagcat ttaccttgat aagaatgaac agtgtaccaa ggcattcttc 1000  
 aattcttggtg acacatacaa ggacagttta atatctaata atgagtgggtg 1050  
 ctactgcttc cagagacagc aagacccacc ttgccagact gagctcagca 1100  
 atattcagaa gcggcaaggg gtaaagaagc tcctaggaca gtatatcccc 1150  
 ctgtgtgatg aagatgggta ctacaagcca acacaatgtc atggcagtgt 1200  
 tggacagtgc tgggtgtgtg acagatatgg aaatgaagtc atgggatcca 1250  
 gaataaatgg tgttcagat tgtgctatag attttgagat ctccggagat 1300  
 tttgctagtg gcgattttca tgaatggact gatgatgagg atgatgaaga 1350  
 cgatattatg aatgatgaag atgaaattga agatgatgat gaagatgaag 1400  
 gggatgatga tgatgggtgg gatgaccatg atgtatacat ttgattgatg 1450  
 acagttgaaa tcaataaatt ctacatttct aatatttaca aaaatgatag 1500  
 cctattttaa attatcttct tccccataa caaatgatt ctaaacctca 1550  
 catatatttt gtataattat ttgaaaaatt gcagctaaag ttatagaact 1600  
 ttatgtttta ataagaatca tttgctttga gtttttatat tccttacaca 1650  
 aaaagaaaat acatatgcag tctagtcaga caaaataaag ttttgaagtg 1700  
 ctactataat aaatttttca cgagaacaaa ctttgtaa at cttccataag 1750  
 caaatgaca gctagtgtt gggatcgtac atgttaattt tttgaaagat 1800  
 aattctaagt gaaattttaa ataaataaat ttttaatgac ctgggtctta 1850  
 aggatttagg aaaaatatgc atgctttaat tgcatttcca aagtagcatc 1900  
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<210> 442

<211> 436

<212> PRT

<213> Homo sapiens

<400> 442

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Cys	Ser	Gln	Ser	Leu	Ala	Ala	Ala	Ala	Ala	Val	Ala	Ala	Ala	Gly
				20					25					30

Gly	Arg	Ser	Asp	Gly	Gly	Asn	Phe	Leu	Asp	Asp	Lys	Gln	Trp	Leu
				35					40					45

Thr	Thr	Ile	Ser	Gln	Tyr	Asp	Lys	Glu	Val	Gly	Gln	Trp	Asn	Lys
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	50	55	60
Phe Arg Asp Glu Val Glu Asp Asp Tyr Phe Arg Thr Trp Ser Pro	65	70	75
Gly Lys Pro Phe Asp Gln Ala Leu Asp Pro Ala Lys Asp Pro Cys	80	85	90
Leu Lys Met Lys Cys Ser Arg His Lys Val Cys Ile Ala Gln Asp	95	100	105
Ser Gln Thr Ala Val Cys Ile Ser His Arg Arg Leu Thr His Arg	110	115	120
Met Lys Glu Ala Gly Val Asp His Arg Gln Trp Arg Gly Pro Ile	125	130	135
Leu Ser Thr Cys Lys Gln Cys Pro Val Val Tyr Pro Ser Pro Val	140	145	150
Cys Gly Ser Asp Gly His Thr Tyr Ser Phe Gln Cys Lys Leu Glu	155	160	165
Tyr Gln Ala Cys Val Leu Gly Lys Gln Ile Ser Val Lys Cys Glu	170	175	180
Gly His Cys Pro Cys Pro Ser Asp Lys Pro Thr Ser Thr Ser Arg	185	190	195
Asn Val Lys Arg Ala Cys Ser Asp Leu Glu Phe Arg Glu Val Ala	200	205	210
Asn Arg Leu Arg Asp Trp Phe Lys Ala Leu His Glu Ser Gly Ser	215	220	225
Gln Asn Lys Lys Thr Lys Thr Leu Leu Arg Pro Glu Arg Ser Arg	230	235	240
Phe Asp Thr Ser Ile Leu Pro Ile Cys Lys Asp Ser Leu Gly Trp	245	250	255
Met Phe Asn Arg Leu Asp Thr Asn Tyr Asp Leu Leu Leu Asp Gln	260	265	270
Ser Glu Leu Arg Ser Ile Tyr Leu Asp Lys Asn Glu Gln Cys Thr	275	280	285
Lys Ala Phe Phe Asn Ser Cys Asp Thr Tyr Lys Asp Ser Leu Ile	290	295	300
Ser Asn Asn Glu Trp Cys Tyr Cys Phe Gln Arg Gln Gln Asp Pro	305	310	315
Pro Cys Gln Thr Glu Leu Ser Asn Ile Gln Lys Arg Gln Gly Val	320	325	330
Lys Lys Leu Leu Gly Gln Tyr Ile Pro Leu Cys Asp Glu Asp Gly	335	340	345



Tyr	Tyr	Lys	Pro	Thr	Gln	Cys	His	Gly	Ser	Val	Gly	Gln	Cys	Trp
				350					355					360
Cys	Val	Asp	Arg	Tyr	Gly	Asn	Glu	Val	Met	Gly	Ser	Arg	Ile	Asn
				365					370					375
Gly	Val	Ala	Asp	Cys	Ala	Ile	Asp	Phe	Glu	Ile	Ser	Gly	Asp	Phe
				380					385					390
Ala	Ser	Gly	Asp	Phe	His	Glu	Trp	Thr	Asp	Asp	Glu	Asp	Asp	Glu
				395					400					405
Asp	Asp	Ile	Met	Asn	Asp	Glu	Asp	Glu	Ile	Glu	Asp	Asp	Asp	Glu
				410					415					420
Asp	Glu	Gly	Asp	Asp	Asp	Asp	Gly	Gly	Asp	Asp	His	Asp	Val	Tyr
				425					430					435

Ile

<210> 443  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 443  
 cagcaatatt cagaagcggc aaggg 25

<210> 444  
 <211> 28  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 444  
 catcatgggc atcaccacca tcatcatc 28

<210> 445  
 <211> 48  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 445  
 gggttactaca agccaacaca atgtcatggc agtgttggac agtgctgg 48

<210> 446  
 <211> 3617  
 <212> DNA  
 <213> Homo sapiens

<400> 446

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cagggatggg cgacaagatc tggctgccct tccccgtgct ccttctggcc 150  
gctctgcctc cggtgctgct gcctggggcg gccggcttca caccttcctt 200  
cgatagcgac ttcaccttta cccttcccgc cggccagaag gagtgcttct 250  
accagcccat gcccctgaag gcctcgctgg agatcgagta ccaagtttta 300  
gatggagcag gattagatat tgatttccat cttgcctctc cagaaggcaa 350  
aaccttagtt tttgaacaaa gaaaatcaga tggagttcac actgtagaga 400  
ctgaagttgg tgattacatg ttctgctttg acaatacatt cagcaccatt 450  
tctgagaagg tgattttctt tgaattaatc ctggataata tgggagaaca 500  
ggcacaagaa caagaagatt ggaagaaata tattactggc acagatatat 550  
tggatatgaa actggaagac atcctggaat ccatcaacag catcaagtcc 600  
agactaagca aaagtgggca catacaaatt ctgcttagag catttgaagc 650  
tcgtgatcga aacatacaag aaagcaactt tgatagagtc aatttctggt 700  
ctatggttaa tttagtggtc atggtggtgg tgtcagccat tcaagtttat 750  
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<210> 447

<211> 229

<212> PRT

<213> Homo sapiens

<400> 447

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				20					25					30

Ser	Leu	Asp	Ser	Asp	Phe	Thr	Phe	Thr	Leu	Pro	Ala	Gly	Gln	Lys
				35					40					45

Glu	Cys	Phe	Tyr	Gln	Pro	Met	Pro	Leu	Lys	Ala	Ser	Leu	Glu	Ile
				50					55					60

Glu	Tyr	Gln	Val	Leu	Asp	Gly	Ala	Gly	Leu	Asp	Ile	Asp	Phe	His
				65					70					75

Leu	Ala	Ser	Pro	Glu	Gly	Lys	Thr	Leu	Val	Phe	Glu	Gln	Arg	Lys
				80					85					90

Ser	Asp	Gly	Val	His	Thr	Val	Glu	Thr	Glu	Val	Gly	Asp	Tyr	Met
				95					100					105

Phe	Cys	Phe	Asp	Asn	Thr	Phe	Ser	Thr	Ile	Ser	Glu	Lys	Val	Ile
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	110		115		120									
Phe	Phe	Glu	Leu	Ile	Leu	Asp	Asn	Met	Gly	Glu	Gln	Ala	Gln	Glu
	125								130					135
Gln	Glu	Asp	Trp	Lys	Lys	Tyr	Ile	Thr	Gly	Thr	Asp	Ile	Leu	Asp
				140					145					150
Met	Lys	Leu	Glu	Asp	Ile	Leu	Glu	Ser	Ile	Asn	Ser	Ile	Lys	Ser
				155					160					165
Arg	Leu	Ser	Lys	Ser	Gly	His	Ile	Gln	Ile	Leu	Leu	Arg	Ala	Phe
				170					175					180
Glu	Ala	Arg	Asp	Arg	Asn	Ile	Gln	Glu	Ser	Asn	Phe	Asp	Arg	Val
				185					190					195
Asn	Phe	Trp	Ser	Met	Val	Asn	Leu	Val	Val	Met	Val	Val	Val	Ser
				200					205					210
Ala	Ile	Gln	Val	Tyr	Met	Leu	Lys	Ser	Leu	Phe	Glu	Asp	Lys	Arg
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Lys	Ser	Arg	Thr											

<210> 448  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

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<210> 449  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 449  
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<210> 450  
 <211> 43  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 450  
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<210> 451  
 <211> 859  
 <212> DNA  
 <213> Homo sapiens

<400> 451  
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 gccctgcccc gtgtgtcctg gatgctgctt tctgcctca ttctcctgtg 150  
 tcaggttcaa ggtgaagaaa ccagaagga actgccctct ccacggatca 200  
 gctgtcccaa aggctccaag gcctatggct cccctgcta tgccttggtt 250  
 ttgtcaccaa aatcctggat ggatgcagat ctggcttgcc agaagcggcc 300  
 ctctggaaaa ctggtgtctg tgctcagtgg ggctgagga tccttcgtgt 350  
 cctccctggg gaggagcatt agtaacagct actcatatcat ctggattggg 400  
 ctccatgacc ccacacaggg ctctgagcct gatggagatg gatgggagtg 450  
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 gctcatcatg gacatgagac cagtgtgaag actcaccctg gaagagaata 700  
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 ttcttttttc ttcaccttca tttcaggctt ttctctgtct tccatgtctt 800  
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 aaaaaaaaaa 859

<210> 452  
 <211> 175  
 <212> PRT  
 <213> Homo sapiens

<400> 452  
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 Ser Cys Leu Ile Leu Leu Cys Gln Val Gln Gly Glu Glu Thr Gln  
 20 25 30  
 Lys Glu Leu Pro Ser Pro Arg Ile Ser Cys Pro Lys Gly Ser Lys  
 35 40 45  
 Ala Tyr Gly Ser Pro Cys Tyr Ala Leu Phe Leu Ser Pro Lys Ser

	50		55		60
Trp Met Asp Ala Asp	Leu Ala Cys Gln Lys Arg Pro Ser Gly Lys				
	65		70		75
Leu Val Ser Val Leu Ser Gly Ala Glu Gly Ser Phe Val Ser Ser					
	80		85		90
Leu Val Arg Ser Ile Ser Asn Ser Tyr Ser Tyr Ile Trp Ile Gly					
	95		100		105
Leu His Asp Pro Thr Gln Gly Ser Glu Pro Asp Gly Asp Gly Trp					
	110		115		120
Glu Trp Ser Ser Thr Asp Val Met Asn Tyr Phe Ala Trp Glu Lys					
	125		130		135
Asn Pro Ser Thr Ile Leu Asn Pro Gly His Cys Gly Ser Leu Ser					
	140		145		150
Arg Ser Thr Gly Phe Leu Lys Trp Lys Asp Tyr Asn Cys Asp Ala					
	155		160		165
Lys Leu Pro Tyr Val Cys Lys Phe Lys Asp					
	170		175		

<210> 453  
 <211> 550  
 <212> DNA  
 <213> Homo sapiens

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 ggcgctcctg gcgctggtgc tggctgcctg cggagagctg gcgccggccc 150  
 tgcgctgcta cgtctgtccg gagcccacag gagtgtcgga ctgtgtcacc 200  
 atcgccacct gcaccaccaa cgaaaccatg tgcaagacca cactctactc 250  
 ccgggagata gtgtaccctt tccaggggga ctccacggtg accaagtcct 300  
 gtgccagcaa gtgtaagccc tcggatgtgg atggcatcgg ccagaccctg 350  
 cccgtgtcct gctgcaatac tgagctgtgc aatgtagacg gggcgcccgc 400  
 tctgaacagc ctccactgcg gggccctcac gtcctccca ctcttgagcc 450  
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<210> 454  
 <211> 125  
 <212> PRT  
 <213> Homo sapiens

<400> 454

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Cys Gly Glu Leu Ala Pro Ala Leu Arg Cys Tyr Val Cys Pro Glu  
20 25 30  
Pro Thr Gly Val Ser Asp Cys Val Thr Ile Ala Thr Cys Thr Thr  
35 40 45  
Asn Glu Thr Met Cys Lys Thr Thr Leu Tyr Ser Arg Glu Ile Val  
50 55 60  
Tyr Pro Phe Gln Gly Asp Ser Thr Val Thr Lys Ser Cys Ala Ser  
65 70 75  
Lys Cys Lys Pro Ser Asp Val Asp Gly Ile Gly Gln Thr Leu Pro  
80 85 90  
Val Ser Cys Cys Asn Thr Glu Leu Cys Asn Val Asp Gly Ala Pro  
95 100 105  
Ala Leu Asn Ser Leu His Cys Gly Ala Leu Thr Leu Leu Pro Leu  
110 115 120  
Leu Ser Leu Arg Leu  
125

<210> 455

<211> 1518

<212> DNA

<213> Homo sapiens

<400> 455

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accagggctc tgcagtcagc gccgcgccg gaatcctgta cccgggcggg 350  
aataagtacc agaccattga caactaccag ccgtaccggt gcgcagagga 400  
cgaggagtgc ggcactgatg agtactgcgc tagtcccacc cgcggagggg 450  
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tgtgtcttct gatcaaaatc atttccgagg agaaattgag gaaaccatca 600



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 catttaaaaa aaaaaaaaa 1518

<210> 456  
 <211> 266  
 <212> PRT  
 <213> Homo sapiens

<400> 456  
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 20 25 30  
 Ala Thr Leu Asn Ser Val Leu Asn Ser Asn Ala Ile Lys Asn Leu  
 35 40 45  
 Pro Pro Pro Leu Gly Gly Ala Ala Gly His Pro Gly Ser Ala Val  
 50 55 60  
 Ser Ala Ala Pro Gly Ile Leu Tyr Pro Gly Gly Asn Lys Tyr Gln  
 65 70 75

Thr	Ile	Asp	Asn	Tyr	Gln	Pro	Tyr	Pro	Cys	Ala	Glu	Asp	Glu	Glu	80	85	90
Cys	Gly	Thr	Asp	Glu	Tyr	Cys	Ala	Ser	Pro	Thr	Arg	Gly	Gly	Asp	95	100	105
Ala	Gly	Val	Gln	Ile	Cys	Leu	Ala	Cys	Arg	Lys	Arg	Arg	Lys	Arg	110	115	120
Cys	Met	Arg	His	Ala	Met	Cys	Cys	Pro	Gly	Asn	Tyr	Cys	Lys	Asn	125	130	135
Gly	Ile	Cys	Val	Ser	Ser	Asp	Gln	Asn	His	Phe	Arg	Gly	Glu	Ile	140	145	150
Glu	Glu	Thr	Ile	Thr	Glu	Ser	Phe	Gly	Asn	Asp	His	Ser	Thr	Leu	155	160	165
Asp	Gly	Tyr	Ser	Arg	Arg	Thr	Thr	Leu	Ser	Ser	Lys	Met	Tyr	His	170	175	180
Thr	Lys	Gly	Gln	Glu	Gly	Ser	Val	Cys	Leu	Arg	Ser	Ser	Asp	Cys	185	190	195
Ala	Ser	Gly	Leu	Cys	Cys	Ala	Arg	His	Phe	Trp	Ser	Lys	Ile	Cys	200	205	210
Lys	Pro	Val	Leu	Lys	Glu	Gly	Gln	Val	Cys	Thr	Lys	His	Arg	Arg	215	220	225
Lys	Gly	Ser	His	Gly	Leu	Glu	Ile	Phe	Gln	Arg	Cys	Tyr	Cys	Gly	230	235	240
Glu	Gly	Leu	Ser	Cys	Arg	Ile	Gln	Lys	Asp	His	His	Gln	Ala	Ser	245	250	255
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<210> 457

<211> 638

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 30, 123, 133, 139, 180, 214, 259, 282, 308, 452, 467, 471, 473, 509, 556

<223> unknown base

<400> 457

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gcgcagcggg agctaaccgc gttttttgtn gcgatggtag cggcgggttt 200

cggcggccac cttntgctgg gagtgagcgc caccttgaat cggttttcaa 250  
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 acccagntt tgcagtcagc gccgcgccgg gaatcctgta cccgggcggg 350  
 aataagtacc agaccattga caattaccag ccgtaccctg gcgcagagga 400  
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 tgtgtnttct gatcaaaatc atttccgagg agaaattgag gaaaccatca 600  
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<210> 458  
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 <212> DNA  
 <213> Homo sapiens

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 ttctctcctg cacgcggtgc ttgggctcgg ccaggcgggg tccgccgcca 150  
 gggtttgagg atgggggagt agctacagga agcgaccccg cgatggcaag 200  
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<210> 459  
 <211> 747  
 <212> PRT  
 <213> Homo sapiens

<400> 459  
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 Arg Ile Ile Leu Cys Phe Leu Ile Val Tyr Met Ala Ile Leu Val  
                     20                    25                    30  
 Gly Thr Asp Gln Asp Phe Tyr Ser Leu Leu Gly Val Ser Lys Thr  
                     35                    40                    45  
 Ala Ser Ser Arg Glu Ile Arg Gln Ala Phe Lys Lys Leu Ala Leu  
                     50                    55                    60  
 Lys Leu His Pro Asp Lys Asn Pro Asn Asn Pro Asn Ala His Gly  
                     65                    70                    75  
 Asp Phe Leu Lys Ile Asn Arg Ala Tyr Glu Val Leu Lys Asp Glu  
                     80                    85                    90  
 Asp Leu Arg Lys Lys Tyr Asp Lys Tyr Gly Glu Lys Gly Leu Glu  
                     95                    100                    105  
 Asp Asn Gln Gly Gly Gln Tyr Glu Ser Trp Asn Tyr Tyr Arg Tyr  
                     110                    115                    120  
 Asp Phe Gly Ile Tyr Asp Asp Asp Pro Glu Ile Ile Thr Leu Glu  
                     125                    130                    135  
 Arg Arg Glu Phe Asp Ala Ala Val Asn Ser Gly Glu Leu Trp Phe  
                     140                    145                    150  
 Val Asn Phe Tyr Ser Pro Gly Cys Ser His Cys His Asp Leu Ala  
                     155                    160                    165  
 Pro Thr Trp Arg Asp Phe Ala Lys Glu Val Asp Gly Leu Leu Arg  
                     170                    175                    180  
 Ile Gly Ala Val Asn Cys Gly Asp Asp Arg Met Leu Cys Arg Met  
                     185                    190                    195  
 Lys Gly Val Asn Ser Tyr Pro Ser Leu Phe Ile Phe Arg Ser Gly

100 200 300 400 500 600 700 800 900 1000

	200		205		210									
Met	Ala	Pro	Val	Lys	Tyr	His	Gly	Asp	Arg	Ser	Lys	Glu	Ser	Leu
	215								220					225
Val	Ser	Phe	Ala	Met	Gln	His	Val	Arg	Ser	Thr	Val	Thr	Glu	Leu
	230								235					240
Trp	Thr	Gly	Asn	Phe	Val	Asn	Ser	Ile	Gln	Thr	Ala	Phe	Ala	Ala
	245								250					255
Gly	Ile	Gly	Trp	Leu	Ile	Thr	Phe	Cys	Ser	Lys	Gly	Gly	Asp	Cys
	260								265					270
Leu	Thr	Ser	Gln	Thr	Arg	Leu	Arg	Leu	Ser	Gly	Met	Leu	Phe	Leu
	275								280					285
Asn	Ser	Leu	Asp	Ala	Lys	Glu	Ile	Tyr	Leu	Glu	Val	Ile	His	Asn
	290								295					300
Leu	Pro	Asp	Phe	Glu	Leu	Leu	Ser	Ala	Asn	Thr	Leu	Glu	Asp	Arg
	305								310					315
Leu	Ala	His	His	Arg	Trp	Leu	Leu	Phe	Phe	His	Phe	Gly	Lys	Asn
	320								325					330
Glu	Asn	Ser	Asn	Asp	Pro	Glu	Leu	Lys	Lys	Leu	Lys	Thr	Leu	Leu
	335								340					345
Lys	Asn	Asp	His	Ile	Gln	Val	Gly	Arg	Phe	Asp	Cys	Ser	Ser	Ala
	350								355					360
Pro	Asp	Ile	Cys	Ser	Asn	Leu	Tyr	Val	Phe	Gln	Pro	Ser	Leu	Ala
	365								370					375
Val	Phe	Lys	Gly	Gln	Gly	Thr	Lys	Glu	Tyr	Glu	Ile	His	His	Gly
	380								385					390
Lys	Lys	Ile	Leu	Tyr	Asp	Ile	Leu	Ala	Phe	Ala	Lys	Glu	Ser	Val
	395								400					405
Asn	Ser	His	Val	Thr	Thr	Leu	Gly	Pro	Gln	Asn	Phe	Pro	Ala	Asn
	410								415					420
Asp	Lys	Glu	Pro	Trp	Leu	Val	Asp	Phe	Phe	Ala	Pro	Trp	Cys	Pro
	425								430					435
Pro	Cys	Arg	Ala	Leu	Leu	Pro	Glu	Leu	Arg	Arg	Ala	Ser	Asn	Leu
	440								445					450
Leu	Tyr	Gly	Gln	Leu	Lys	Phe	Gly	Thr	Leu	Asp	Cys	Thr	Val	His
	455								460					465
Glu	Gly	Leu	Cys	Asn	Met	Tyr	Asn	Ile	Gln	Ala	Tyr	Pro	Thr	Thr
	470								475					480
Val	Val	Phe	Asn	Gln	Ser	Asn	Ile	His	Glu	Tyr	Glu	Gly	His	His
	485								490					495

Ser Ala Glu Gln Ile Leu Glu Phe Ile	Glu Asp Leu Met Asn Pro
500	510
Ser Val Val Ser Leu Thr Pro Thr Thr	Phe Asn Glu Leu Val Thr
515	525
Gln Arg Lys His Asn Glu Val Trp Met	Val Asp Phe Tyr Ser Pro
530	540
Trp Cys His Pro Cys Gln Val Leu Met	Pro Glu Trp Lys Arg Met
545	555
Ala Arg Thr Leu Thr Gly Leu Ile Asn	Val Gly Ser Ile Asp Cys
560	570
Gln Gln Tyr His Ser Phe Cys Ala Gln	Glu Asn Val Gln Arg Tyr
575	585
Pro Glu Ile Arg Phe Phe Pro Pro Lys	Ser Asn Lys Ala Tyr Gln
590	600
Tyr His Ser Tyr Asn Gly Trp Asn Arg	Asp Ala Tyr Ser Leu Arg
605	615
Ile Trp Gly Leu Gly Phe Leu Pro Gln	Val Ser Thr Asp Leu Thr
620	630
Pro Gln Thr Phe Ser Glu Lys Val Leu	Gln Gly Lys Asn His Trp
635	645
Val Ile Asp Phe Tyr Ala Pro Trp Cys	Gly Pro Cys Gln Asn Phe
650	660
Ala Pro Glu Phe Glu Leu Leu Ala Arg	Met Ile Lys Gly Lys Val
665	675
Lys Ala Gly Lys Val Asp Cys Gln Ala	Tyr Ala Gln Thr Cys Gln
680	690
Lys Ala Gly Ile Arg Ala Tyr Pro Thr	Val Lys Phe Tyr Phe Tyr
695	705
Glu Arg Ala Lys Arg Asn Phe Gln Glu	Glu Gln Ile Asn Thr Arg
710	720
Asp Ala Lys Ala Ile Ala Ala Leu Ile	Ser Glu Lys Leu Glu Thr
725	735
Leu Arg Asn Gln Gly Lys Arg Asn Lys	Asp Glu Leu
740	745

<210> 460

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe



<400> 460  
actccccagg ctgttcacac tgcc 24

<210> 461  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 461  
gatcagccag ccaataccag cagc 24

<210> 462  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 462  
gtggtgatga tagaatgctt tgccgaatga aaggagtcaa cagctatccc 50

<210> 463  
<211> 1818  
<212> DNA  
<213> Homo sapiens

<400> 463  
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ggacagagca aagccatgaa catcatccta gaaatccttc tgcttctgat 100  
caccatcatc tactcctact tggagtcggt ggtgaagttt ttcattcctc 150  
agaggagaaa atctgtggct ggggagattg ttctcattac tggagctggg 200  
catggaatag gcaggcagac tacttatgaa tttgcaaaac gacagagcat 250  
attggttctg tgggatatta ataagcgcgg tgtggaggaa actgcagctg 300  
agtgccgaaa actaggcgtc actgcgcatg cgtatgtggt agactgcagc 350  
aacagagaag agatctatcg ctctctaaat caggtgaaga aagaagtggg 400  
tgatgtaaca atcgtggtga ataatgctgg gacagtatat ccagccgatc 450  
ttctcagcac caaggatgaa gagattacca agacatttga ggtcaacatc 500  
ctaggacatt tttggatcac aaaagcactt cttccatcga tgatggagag 550  
aaatcatggc cacatcgta cagtggcttc agtgtgcggc cacgaaggga 600  
ttccttacct catcccatat tgttccagca aatttgccgc tgttggcttt 650  
cacagaggtc tgacatcaga acttcaggcc ttgggaaaaa ctggtatcaa 700

aacctcatgt	ctctgcccag	tttttgtgaa	tactgggttc	accaaaaatc	750
caagcacaag	attatggcct	gtattggaga	cagatgaagt	cgtaagaagt	800
ctgatagatg	gaataacttac	caataagaaa	atgatttttg	ttccatcgta	850
tatcaatatc	tttctgagac	tacagaagtt	tcttcctgaa	cgcgccctcag	900
cgattttaaa	tcgtatgcag	aatattcaat	ttgaagcagt	ggttggccac	950
aaaatcaaaa	tgaaatgaat	aaataagctc	cagccagaga	tgtatgcatg	1000
ataatgatat	gaatagtttc	gaatcaatgc	tgcaaagctt	tatttcacat	1050
tttttcagtc	ctgataatat	taaaaacatt	ggtttggcac	tagcagcagt	1100
caaacgaaca	agattaatta	cctgtcttcc	tgtttctcaa	gaatatttac	1150
gtagtttttc	ataggtctgt	ttttcctttc	atgcctctta	aaaacttctg	1200
tgcttacata	aacatactta	aaaggttttc	tttaagatat	tttatttttc	1250
catttaaagg	tggacaaaag	ctacctccct	aaaagtaa	ataagagaa	1300
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aacggtgcaa	ctctattctg	gactttatta	cttgattctg	tcttctgtat	1550
aactctgaag	tccacaaaaa	gtggaccctc	tatatttcct	cccttttttat	1600
agtcttataa	gatacattat	gaaaggtgac	cgactctatt	ttaaatctca	1650
gaatttttaag	ttctagcccc	atgataacct	ttttctttgt	aatttatgct	1700
ttcatatatc	cttgggtccca	gagatgttta	gacaatttta	ggctcaaaaa	1750
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atggacccaa	gagaagaa	1818			

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<210> 464
<211> 300
<212> PRT
<213> Homo sapiens
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Met Asn Ile Ile Leu Glu Ile Leu Leu Leu Leu Ile Thr Ile Ile  
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Arg	Lys	Ser	Val	Ala	Gly	Glu	Ile	Val	Leu	Ile	Thr	Gly	Ala	Gly		35	40	45
His	Gly	Ile	Gly	Arg	Gln	Thr	Thr	Tyr	Glu	Phe	Ala	Lys	Arg	Gln		50	55	60
Ser	Ile	Leu	Val	Leu	Trp	Asp	Ile	Asn	Lys	Arg	Gly	Val	Glu	Glu		65	70	75
Thr	Ala	Ala	Glu	Cys	Arg	Lys	Leu	Gly	Val	Thr	Ala	His	Ala	Tyr		80	85	90
Val	Val	Asp	Cys	Ser	Asn	Arg	Glu	Glu	Ile	Tyr	Arg	Ser	Leu	Asn		95	100	105
Gln	Val	Lys	Lys	Glu	Val	Gly	Asp	Val	Thr	Ile	Val	Val	Asn	Asn		110	115	120
Ala	Gly	Thr	Val	Tyr	Pro	Ala	Asp	Leu	Leu	Ser	Thr	Lys	Asp	Glu		125	130	135
Glu	Ile	Thr	Lys	Thr	Phe	Glu	Val	Asn	Ile	Leu	Gly	His	Phe	Trp		140	145	150
Ile	Thr	Lys	Ala	Leu	Leu	Pro	Ser	Met	Met	Glu	Arg	Asn	His	Gly		155	160	165
His	Ile	Val	Thr	Val	Ala	Ser	Val	Cys	Gly	His	Glu	Gly	Ile	Pro		170	175	180
Tyr	Leu	Ile	Pro	Tyr	Cys	Ser	Ser	Lys	Phe	Ala	Ala	Val	Gly	Phe		185	190	195
His	Arg	Gly	Leu	Thr	Ser	Glu	Leu	Gln	Ala	Leu	Gly	Lys	Thr	Gly		200	205	210
Ile	Lys	Thr	Ser	Cys	Leu	Cys	Pro	Val	Phe	Val	Asn	Thr	Gly	Phe		215	220	225
Thr	Lys	Asn	Pro	Ser	Thr	Arg	Leu	Trp	Pro	Val	Leu	Glu	Thr	Asp		230	235	240
Glu	Val	Val	Arg	Ser	Leu	Ile	Asp	Gly	Ile	Leu	Thr	Asn	Lys	Lys		245	250	255
Met	Ile	Phe	Val	Pro	Ser	Tyr	Ile	Asn	Ile	Phe	Leu	Arg	Leu	Gln		260	265	270
Lys	Phe	Leu	Pro	Glu	Arg	Ala	Ser	Ala	Ile	Leu	Asn	Arg	Met	Gln		275	280	285
Asn	Ile	Gln	Phe	Glu	Ala	Val	Val	Gly	His	Lys	Ile	Lys	Met	Lys		290	295	300

<210> 465  
 <211> 1547  
 <212> DNA  
 <213> Homo sapiens

<400> 465

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gctgtggctg gtgctggggt cgggtgttcat gatcctgctg atcatcgtgt 200  
actgggacag cgcaggcgcc gcgcacttct acttgacacac gtccttctct 250  
aggccgcaca cggggccgcc gctgcccacg cccgggcccgg acagggacag 300  
ggagctcacg gccgactccg atgtcgacga gtttctggac aagtttctca 350  
gtgctggcgt gaagcagagc gaccttccca gaaaggagac ggagcagccg 400  
cctgcgccgg ggagcatgga ggagagcgtg agaggctacg actggtcccc 450  
gcgcgacgcc cggcgcagcc cagaccaggg ccggcagcag gcggagcgga 500  
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aaggagcgcg cattcgacga catccccaac tcggagctga gccacctgat 600  
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gcaccaactg gaagcgcgtg atgatcgtgc tgagcgggaag cctgctgcac 700  
cgcggtgcgc cctaccgcga cccgctgcgc atcccgcgcg agcacgtgca 750  
caacgccagc gcgcacctga ccttcaacaa gttctggcgc cgctacggga 800  
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ctcttcgtgc gcgaccctt cgtgcgcctg atctccgct tccgcagcaa 900  
gttcgagctg gagaacgagg agttctaccg caagttcgcc gtgcccattg 950  
tgcggtgta cgccaaccac accagcctgc ccgcctcggc gcgcgaggcc 1000  
ttccgcgtg gcctcaagggt gtccttcgcc aacttcatcc agtacctgct 1050  
ggacccgcac acggagaagc tggcgccctt caacgagcac tggcggcagg 1100  
tgtaccgct ctgccaccg tgccagatcg actacgactt cgtggggaag 1150  
ctggagactc tggacgagga cggcgcgag ctgctgcagc tactccaggt 1200  
ggaccggcag ctccgcttcc ccccgagcta ccggaacagg accgccagca 1250  
gctgggagga ggactggttc gccaaagatcc ccctggcctg gaggcagcag 1300  
ctgtataaac tctacgaggc cgactttgtt ctcttcggct accccaagcc 1350  
cgaaaacctc ctccgagact gaaagctttc gcgttgcttt ttctcgcgtg 1400  
cctggaacct gacgcacgcg cactccagtt tttttatgac ctacgatttt 1450

CGTCGCGCGC

gcaatctggg cttcttggtc actccactgc ctctatccat tgagtactgt 1500

atcgatattg ttttttaaga ttaatatatt tcagggtattt aatacga 1547

<210> 466

<211> 414

<212> PRT

<213> Homo sapiens

<400> 466

Met Thr Lys Ala Arg Leu Phe Arg Leu Trp Leu Val Leu Gly Ser  
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Val Phe Met Ile Leu Leu Ile Ile Val Tyr Trp Asp Ser Ala Gly  
20 25 30

Ala Ala His Phe Tyr Leu His Thr Ser Phe Ser Arg Pro His Thr  
35 40 45

Gly Pro Pro Leu Pro Thr Pro Gly Pro Asp Arg Asp Arg Glu Leu  
50 55 60

Thr Ala Asp Ser Asp Val Asp Glu Phe Leu Asp Lys Phe Leu Ser  
65 70 75

Ala Gly Val Lys Gln Ser Asp Leu Pro Arg Lys Glu Thr Glu Gln  
80 85 90

Pro Pro Ala Pro Gly Ser Met Glu Glu Ser Val Arg Gly Tyr Asp  
95 100 105

Trp Ser Pro Arg Asp Ala Arg Arg Ser Pro Asp Gln Gly Arg Gln  
110 115 120

Gln Ala Glu Arg Arg Ser Val Leu Arg Gly Phe Cys Ala Asn Ser  
125 130 135

Ser Leu Ala Phe Pro Thr Lys Glu Arg Ala Phe Asp Asp Ile Pro  
140 145 150

Asn Ser Glu Leu Ser His Leu Ile Val Asp Asp Arg His Gly Ala  
155 160 165

Ile Tyr Cys Tyr Val Pro Lys Val Ala Cys Thr Asn Trp Lys Arg  
170 175 180

Val Met Ile Val Leu Ser Gly Ser Leu Leu His Arg Gly Ala Pro  
185 190 195

Tyr Arg Asp Pro Leu Arg Ile Pro Arg Glu His Val His Asn Ala  
200 205 210

Ser Ala His Leu Thr Phe Asn Lys Phe Trp Arg Arg Tyr Gly Lys  
215 220 225

Leu Ser Arg His Leu Met Lys Val Lys Leu Lys Lys Tyr Thr Lys  
230 235 240

Phe Leu Phe Val Arg Asp Pro Phe Val Arg Leu Ile Ser Ala Phe  
 245 250 255  
 Arg Ser Lys Phe Glu Leu Glu Asn Glu Glu Phe Tyr Arg Lys Phe  
 260 265 270  
 Ala Val Pro Met Leu Arg Leu Tyr Ala Asn His Thr Ser Leu Pro  
 275 280 285  
 Ala Ser Ala Arg Glu Ala Phe Arg Ala Gly Leu Lys Val Ser Phe  
 290 295 300  
 Ala Asn Phe Ile Gln Tyr Leu Leu Asp Pro His Thr Glu Lys Leu  
 305 310 315  
 Ala Pro Phe Asn Glu His Trp Arg Gln Val Tyr Arg Leu Cys His  
 320 325 330  
 Pro Cys Gln Ile Asp Tyr Asp Phe Val Gly Lys Leu Glu Thr Leu  
 335 340 345  
 Asp Glu Asp Ala Ala Gln Leu Leu Gln Leu Leu Gln Val Asp Arg  
 350 355 360  
 Gln Leu Arg Phe Pro Pro Ser Tyr Arg Asn Arg Thr Ala Ser Ser  
 365 370 375  
 Trp Glu Glu Asp Trp Phe Ala Lys Ile Pro Leu Ala Trp Arg Gln  
 380 385 390  
 Gln Leu Tyr Lys Leu Tyr Glu Ala Asp Phe Val Leu Phe Gly Tyr  
 395 400 405  
 Pro Lys Pro Glu Asn Leu Leu Arg Asp  
 410

<210> 467  
 <211> 1071  
 <212> DNA  
 <213> Homo sapiens

<400> 467  
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 acgggatggc tacgggaacg cgctatgccg ggaaggtggg ggtcgtgacc 150  
 gggggcgggc gcggcatcgg agctgggatc gtgcgcgcct tcgtgaacag 200  
 cggggccccga gtggttatct gcgacaagga tgagtctggg ggccggggccc 250  
 tggagcagga gtcacctgga gctgtcttta tcctctgtga tgtgactcag 300  
 gaagatgatg tgaagacctt ggtttctgag accatccgcc gatttgggccg 350  
 cctggattgt gttgtcaaca acgctggcca ccacccaccc ccacagaggc 400

ctgaggagac ctctgcccag ggattccgcc agctgctgga gctgaaccta 450  
 ctggggacgt acaccttgac caagctcgcc ctcccctacc tgcggaagag 500  
 tcaagggaat gtcacaaaca tctccagcct ggtgggggca atcggccagg 550  
 cccaggcagt tccctatgtg gccaccaagg gggcagtaac agccatgacc 600  
 aaagctttgg ccttgatga aagtccatat ggtgtccgag tcaactgtat 650  
 ctccccagga aacatctgga ccccgctgtg ggaggagctg gcagccttaa 700  
 tgccagaccc tagggccaca atccgagagg gcatgctggc ccagccactg 750  
 ggccgcatgg gccagcccg ctaggtcggg gctgcggcag tgttcctggc 800  
 ctccgaagcc aacttctgca cgggcattga actgctcgtg acgggggggtg 850  
 cagagctggg gtacgggtgc aaggccagtc ggagcacccc cgtggacgcc 900  
 cccgatatcc cttctgatt tctctcattt ctacttgggg cccccttcct 950  
 aggactctcc caccctaaac tccaacctgt atcagatgca gcccctaacg 1000  
 ccttagactc taagcccagt tagcaagggtg ccgggtcacc ctgcaggttc 1050  
 ccataaaaaac gatttgcagc c 1071

<210> 468  
 <211> 270  
 <212> PRT  
 <213> Homo sapiens

<400> 468  
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 Asn Ser Gly Ala Arg Val Val Ile Cys Asp Lys Asp Glu Ser Gly  
 35 40 45  
 Gly Arg Ala Leu Glu Gln Glu Leu Pro Gly Ala Val Phe Ile Leu  
 50 55 60  
 Cys Asp Val Thr Gln Glu Asp Asp Val Lys Thr Leu Val Ser Glu  
 65 70 75  
 Thr Ile Arg Arg Phe Gly Arg Leu Asp Cys Val Val Asn Asn Ala  
 80 85 90  
 Gly His His Pro Pro Pro Gln Arg Pro Glu Glu Thr Ser Ala Gln  
 95 100 105  
 Gly Phe Arg Gln Leu Leu Glu Leu Asn Leu Leu Gly Thr Tyr Thr  
 110 115 120

Leu	Thr	Lys	Leu	Ala	Leu	Pro	Tyr	Leu	Arg	Lys	Ser	Gln	Gly	Asn
				125					130					135
Val	Ile	Asn	Ile	Ser	Ser	Leu	Val	Gly	Ala	Ile	Gly	Gln	Ala	Gln
				140					145					150
Ala	Val	Pro	Tyr	Val	Ala	Thr	Lys	Gly	Ala	Val	Thr	Ala	Met	Thr
				155					160					165
Lys	Ala	Leu	Ala	Leu	Asp	Glu	Ser	Pro	Tyr	Gly	Val	Arg	Val	Asn
				170					175					180
Cys	Ile	Ser	Pro	Gly	Asn	Ile	Trp	Thr	Pro	Leu	Trp	Glu	Glu	Leu
				185					190					195
Ala	Ala	Leu	Met	Pro	Asp	Pro	Arg	Ala	Thr	Ile	Arg	Glu	Gly	Met
				200					205					210
Leu	Ala	Gln	Pro	Leu	Gly	Arg	Met	Gly	Gln	Pro	Ala	Glu	Val	Gly
				215					220					225
Ala	Ala	Ala	Val	Phe	Leu	Ala	Ser	Glu	Ala	Asn	Phe	Cys	Thr	Gly
				230					235					240
Ile	Glu	Leu	Leu	Val	Thr	Gly	Gly	Ala	Glu	Leu	Gly	Tyr	Gly	Cys
				245					250					255
Lys	Ala	Ser	Arg	Ser	Thr	Pro	Val	Asp	Ala	Pro	Asp	Ile	Pro	Ser
				260					265					270

<210> 469  
 <211> 687  
 <212> DNA  
 <213> Homo sapiens

<400> 469  
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 ccagcccagg agccccaaaa gcaagaggaa ggggcaagg cggcctgggc 150  
 ccttggtccc tggccctcac caggtgccac tggacctggt gtcacggatg 200  
 aaaccgtatg cccgcatgga ggagtatgag aggaacatcg aggagatggt 250  
 ggcccagctg aggaacagct cagagctggc ccagagaaaag tgtgaggtca 300  
 acttgcagct gtggatgtcc aacaagagga gcctgtctcc ctggggctac 350  
 agcatcaacc acgaccccag ccgtatcccc gtggacctgc cggaggcacg 400  
 gtgcctgtgt ctgggctgtg tgaaccctt caccatgcag gaggaccgca 450  
 gcatggtgag cgtgccggtg ttcagccagg ttctgtgctg ccgccgcctc 500  
 tgcccgccac cgccccgcac agggccttgc cgccagcgcg cagtcatgga 550



gaccatcgct gtgggctgca cctgcatctt ctgaatcacc tggcccagaa 600  
gccaggccag cagcccagaga ccattctcct tgcacctttg tgccaagaaa 650  
ggcctatgaa aagtaaacac tgacttttga aagcaag 687

<210> 470  
<211> 180  
<212> PRT  
<213> Homo sapiens

<400> 470  
Met Asp Trp Pro His Asn Leu Leu Phe Leu Leu Thr Ile Ser Ile  
1 5 10 15  
Phe Leu Gly Leu Gly Gln Pro Arg Ser Pro Lys Ser Lys Arg Lys  
20 25 30  
Gly Gln Gly Arg Pro Gly Pro Leu Ala Pro Gly Pro His Gln Val  
35 40 45  
Pro Leu Asp Leu Val Ser Arg Met Lys Pro Tyr Ala Arg Met Glu  
50 55 60  
Glu Tyr Glu Arg Asn Ile Glu Glu Met Val Ala Gln Leu Arg Asn  
65 70 75  
Ser Ser Glu Leu Ala Gln Arg Lys Cys Glu Val Asn Leu Gln Leu  
80 85 90  
Trp Met Ser Asn Lys Arg Ser Leu Ser Pro Trp Gly Tyr Ser Ile  
95 100 105  
Asn His Asp Pro Ser Arg Ile Pro Val Asp Leu Pro Glu Ala Arg  
110 115 120  
Cys Leu Cys Leu Gly Cys Val Asn Pro Phe Thr Met Gln Glu Asp  
125 130 135  
Arg Ser Met Val Ser Val Pro Val Phe Ser Gln Val Pro Val Arg  
140 145 150  
Arg Arg Leu Cys Pro Pro Pro Pro Arg Thr Gly Pro Cys Arg Gln  
155 160 165  
Arg Ala Val Met Glu Thr Ile Ala Val Gly Cys Thr Cys Ile Phe  
170 175 180

<210> 471  
<211> 2368  
<212> DNA  
<213> Homo sapiens

<400> 471  
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aaacccggcg ggcgagcgag gctgcggggc ggccgctgcc cttccccaca 100



cctgagcatc cccaaagtgt aacgtagaag ccttgcaccc ttttcttggtg 1600  
taaagtattt atttttgtca aattgcagga aacatcaggc accacagtgc 1650  
atgaaaaatc tttcacagct agaaattgaa agggccttgg gtatagagag 1700  
cagctcagaa gtcacccag ccctctgaat ctctgtgct atgttttatt 1750  
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acactcttca ctattatctc ttggtcagag gactccaata acagccaggt 1850  
ttacatgaac tgtgtttggt cattctgacc taaggggttt agataatcag 1900  
taaccataac ccctgaagct gtgactgcca aacatctcaa atgaaatgtt 1950  
gtggccatca gagactcaaa aggaagtaag gattttacaa gacagattaa 2000  
aaaaaaattg ttttgtccaa aatatagttg ttgttgattt ttttttaagt 2050  
tttctaagca atatttttca agccagaagt cctctaagtc ttgccagtac 2100  
aaggtagtct tgtgaagaaa agttgaatac tgttttggtt tcatctcaag 2150  
gggttccctg ggtcttgaac tactttaata ataactaaaa aaccacttct 2200  
gattttcctt cagtgatgtg cttttggtga aagaattaat gaactccagt 2250  
acctgaaagt gaaagatttg attttgtttc catcttctgt aatcttccaa 2300  
agaattatat ctttgtaaata ctctcaatac tcaatctact gtaagtaccc 2350  
agggaggcta atttcttt 2368

<210> 472

<211> 349

<212> PRT

<213> Homo sapiens

<400> 472

Met	Ala	Gly	Gly	Arg	Cys	Gly	Pro	Gln	Leu	Thr	Ala	Leu	Leu	Ala
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Ala	Trp	Ile	Ala	Ala	Val	Ala	Ala	Thr	Ala	Gly	Pro	Glu	Glu	Ala
			20					25						30

Ala	Leu	Pro	Pro	Glu	Gln	Ser	Arg	Val	Gln	Pro	Met	Thr	Ala	Ser
				35					40					45

Asn	Trp	Thr	Leu	Val	Met	Glu	Gly	Glu	Trp	Met	Leu	Lys	Phe	Tyr
			50					55						60

Ala	Pro	Trp	Cys	Pro	Ser	Cys	Gln	Gln	Thr	Asp	Ser	Glu	Trp	Glu
			65					70						75

Ala	Phe	Ala	Lys	Asn	Gly	Glu	Ile	Leu	Gln	Ile	Ser	Val	Gly	Lys
			80					85						90

Val	Asp	Val	Ile	Gln	Glu	Pro	Gly	Leu	Ser	Gly	Arg	Phe	Phe	Val	95	100	105
Thr	Thr	Leu	Pro	Ala	Phe	Phe	His	Ala	Lys	Asp	Gly	Ile	Phe	Arg	110	115	120
Arg	Tyr	Arg	Gly	Pro	Gly	Ile	Phe	Glu	Asp	Leu	Gln	Asn	Tyr	Ile	125	130	135
Leu	Glu	Lys	Lys	Trp	Gln	Ser	Val	Glu	Pro	Leu	Thr	Gly	Trp	Lys	140	145	150
Ser	Pro	Ala	Ser	Leu	Thr	Met	Ser	Gly	Met	Ala	Gly	Leu	Phe	Ser	155	160	165
Ile	Ser	Gly	Lys	Ile	Trp	His	Leu	His	Asn	Tyr	Phe	Thr	Val	Thr	170	175	180
Leu	Gly	Ile	Pro	Ala	Trp	Cys	Ser	Tyr	Val	Phe	Phe	Val	Ile	Ala	185	190	195
Thr	Leu	Val	Phe	Gly	Leu	Phe	Met	Gly	Leu	Val	Leu	Val	Val	Ile	200	205	210
Ser	Glu	Cys	Phe	Tyr	Val	Pro	Leu	Pro	Arg	His	Leu	Ser	Glu	Arg	215	220	225
Ser	Glu	Gln	Asn	Arg	Arg	Ser	Glu	Glu	Ala	His	Arg	Ala	Glu	Gln	230	235	240
Leu	Gln	Asp	Ala	Glu	Glu	Glu	Lys	Asp	Asp	Ser	Asn	Glu	Glu	Glu	245	250	255
Asn	Lys	Asp	Ser	Leu	Val	Asp	Asp	Glu	Glu	Glu	Lys	Glu	Asp	Leu	260	265	270
Gly	Asp	Glu	Asp	Glu	Ala	Glu	Glu	Glu	Glu	Glu	Glu	Asp	Asn	Leu	275	280	285
Ala	Ala	Gly	Val	Asp	Glu	Glu	Arg	Ser	Glu	Ala	Asn	Asp	Gln	Gly	290	295	300
Pro	Pro	Gly	Glu	Asp	Gly	Val	Thr	Arg	Glu	Glu	Val	Glu	Pro	Glu	305	310	315
Glu	Ala	Glu	Glu	Gly	Ile	Ser	Glu	Gln	Pro	Cys	Pro	Ala	Asp	Thr	320	325	330
Glu	Val	Val	Glu	Asp	Ser	Leu	Arg	Gln	Arg	Lys	Ser	Gln	His	Ala	335	340	345
Asp Lys Gly Leu																	

<210> 473  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

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gtccagccca tgaccgcctc caac 24

<210> 474  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 474  
ctctcctcat ccacaccagc agcc 24

<210> 475  
<211> 44  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 475  
gtggatgctg aaattttacg ccccatgggtg tccatcctgc cagc 44

<210> 476  
<211> 2478  
<212> DNA  
<213> Homo sapiens

<400> 476  
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gccacatga tttgactcag agattctctt ttgtccacag acagtcattc 100  
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tcaagaacaa tggaatatca tcctgattta gaaaatttgg atgaagatgg 200  
atatactcaa ttacacttcg actctcaaag caataccagg atagctgttg 250  
tttcagagaa aggatcgtgt gctgcatctc ctccctggcg cctcattgct 300  
gtaattttgg gaatcctatg cttggtaata ctggtgatag ctgtggtcct 350  
gggtaccatg ggggttcttt ccagcccttg tcctcctaata tggattatat 400  
atgagaagag ctgttatcta ttcagcatgt cactaaattc ctgggatgga 450  
agtaaaagac aatgctggca actgggctct aatctcctaa agatagacag 500  
ctcaaatgaa ttgggattta tagtaaaaca agtgtcttcc caacctgata 550  
attcattttg gataggcctt tctcggcccc agactgaggt accatggctc 600



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tcattggaac aagtattaac attttggaat atgttttatt agttttgtga 2150  
tgtactgttt tacaatTTTT accatTTTTt tcagtaatta ctgtaaaatg 2200  
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aaaaaaaaaa aaaaaaaaaa aaaaaaaaa 2478

<210> 477  
<211> 201  
<212> PRT  
<213> Homo sapiens

<400> 477  
Met Glu Tyr His Pro Asp Leu Glu Asn Leu Asp Glu Asp Gly Tyr  
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Thr Gln Leu His Phe Asp Ser Gln Ser Asn Thr Arg Ile Ala Val  
20 25 30  
Val Ser Glu Lys Gly Ser Cys Ala Ala Ser Pro Pro Trp Arg Leu  
35 40 45  
Ile Ala Val Ile Leu Gly Ile Leu Cys Leu Val Ile Leu Val Ile  
50 55 60  
Ala Val Val Leu Gly Thr Met Gly Val Leu Ser Ser Pro Cys Pro  
65 70 75  
Pro Asn Trp Ile Ile Tyr Glu Lys Ser Cys Tyr Leu Phe Ser Met  
80 85 90  
Ser Leu Asn Ser Trp Asp Gly Ser Lys Arg Gln Cys Trp Gln Leu  
95 100 105  
Gly Ser Asn Leu Leu Lys Ile Asp Ser Ser Asn Glu Leu Gly Phe  
110 115 120  
Ile Val Lys Gln Val Ser Ser Gln Pro Asp Asn Ser Phe Trp Ile  
125 130 135  
Gly Leu Ser Arg Pro Gln Thr Glu Val Pro Trp Leu Trp Glu Asp  
140 145 150  
Gly Ser Thr Phe Ser Ser Asn Leu Phe Gln Ile Arg Thr Thr Ala  
155 160 165  
Thr Gln Glu Asn Pro Ser Pro Asn Cys Val Trp Ile His Val Ser

170

175

180

Val Ile Tyr Asp Gln Leu Cys Ser Val Pro Ser Tyr Ser Ile Cys  
 185 190 195

Glu Lys Lys Phe Ser Met  
 200

&lt;210&gt; 478

&lt;211&gt; 27

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic oligonucleotide probe

&lt;400&gt; 478

gtccacagac agtcatctca ggagcag 27

&lt;210&gt; 479

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic oligonucleotide probe

&lt;400&gt; 479

acaagtgtct tcccaacctg 20

&lt;210&gt; 480

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic oligonucleotide probe

&lt;400&gt; 480

atcctcccag agccatggta cctc 24

&lt;210&gt; 481

&lt;211&gt; 51

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic oligonucleotide probe

&lt;400&gt; 481

ccaaggatag ctgttggttc agagaaagga tcgtgtgctg catctcctcc 50

t 51

&lt;210&gt; 482

&lt;211&gt; 3819

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens



<400> 482

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tcttggtca tcgtaacctc cacctcccgg gttcaagtga ttctcatgcc 150  
tcagcctccc gagtagctgg gattacaggt ggtgacttcc aagagtgact 200  
ccgtcggagg aaaatgactc cccagtcgct gctgcagacg aactgttcc 250  
tgctgagtct gctcttctg gtccaagggt cccacggcag gggccacagg 300  
gaagactttc gcttctgcag ccagcggaac cagacacaca ggagcagcct 350  
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 aagaagtaca tggtcattgt agagaatttg gaaactgtag aagagaatca 3700  
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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3800  
 aaaaaaaaaa aaaaaaaaaa 3819

<210> 483

<211> 693

<212> PRT

<213> Homo sapiens

<400> 483

Met Thr Pro Gln Ser Leu Leu Gln Thr Thr Leu Phe Leu Leu Ser  
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Leu Leu Phe Leu Val Gln Gly Ala His Gly Arg Gly His Arg Glu  
20 25 30

Asp Phe Arg Phe Cys Ser Gln Arg Asn Gln Thr His Arg Ser Ser  
35 40 45

Leu His Tyr Lys Pro Thr Pro Asp Leu Arg Ile Ser Ile Glu Asn  
50 55 60

Ser Glu Glu Ala Leu Thr Val His Ala Pro Phe Pro Ala Ala His  
65 70 75

Pro	Ala	Ser	Arg	Ser	Phe	Pro	Asp	Pro	Arg	Gly	Leu	Tyr	His	Phe	
				80					85					90	
Cys	Leu	Tyr	Trp	Asn	Arg	His	Ala	Gly	Arg	Leu	His	Leu	Leu	Tyr	
				95					100					105	
Gly	Lys	Arg	Asp	Phe	Leu	Leu	Ser	Asp	Lys	Ala	Ser	Ser	Leu	Leu	
				110					115					120	
Cys	Phe	Gln	His	Gln	Glu	Glu	Ser	Leu	Ala	Gln	Gly	Pro	Pro	Leu	
				125					130					135	
Leu	Ala	Thr	Ser	Val	Thr	Ser	Trp	Trp	Ser	Pro	Gln	Asn	Ile	Ser	
				140					145					150	
Leu	Pro	Ser	Ala	Ala	Ser	Phe	Thr	Phe	Ser	Phe	His	Ser	Pro	Pro	
				155					160					165	
His	Thr	Ala	Ala	His	Asn	Ala	Ser	Val	Asp	Met	Cys	Glu	Leu	Lys	
				170					175					180	
Arg	Asp	Leu	Gln	Leu	Leu	Ser	Gln	Phe	Leu	Lys	His	Pro	Gln	Lys	
				185					190					195	
Ala	Ser	Arg	Arg	Pro	Ser	Ala	Ala	Pro	Ala	Ser	Gln	Gln	Leu	Gln	
				200					205					210	
Ser	Leu	Glu	Ser	Lys	Leu	Thr	Ser	Val	Arg	Phe	Met	Gly	Asp	Met	
				215					220					225	
Val	Ser	Phe	Glu	Glu	Asp	Arg	Ile	Asn	Ala	Thr	Val	Trp	Lys	Leu	
				230					235					240	
Gln	Pro	Thr	Ala	Gly	Leu	Gln	Asp	Leu	His	Ile	His	Ser	Arg	Gln	
				245					250					255	
Glu	Glu	Glu	Gln	Ser	Glu	Ile	Met	Glu	Tyr	Ser	Val	Leu	Leu	Pro	
				260					265					270	
Arg	Thr	Leu	Phe	Gln	Arg	Thr	Lys	Gly	Arg	Ser	Gly	Glu	Ala	Glu	
				275					280					285	
Lys	Arg	Leu	Leu	Leu	Val	Asp	Phe	Ser	Ser	Gln	Ala	Leu	Phe	Gln	
				290					295					300	
Asp	Lys	Asn	Ser	Ser	Gln	Val	Leu	Gly	Glu	Lys	Val	Leu	Gly	Ile	
				305					310					315	
Val	Val	Gln	Asn	Thr	Lys	Val	Ala	Asn	Leu	Thr	Glu	Pro	Val	Val	
				320					325					330	
Leu	Thr	Phe	Gln	His	Gln	Leu	Gln	Pro	Lys	Asn	Val	Thr	Leu	Gln	
				335					340					345	
Cys	Val	Phe	Trp	Val	Glu	Asp	Pro	Thr	Leu	Ser	Ser	Pro	Gly	His	
				350					355					360	
Trp	Ser	Ser	Ala	Gly	Cys	Glu	Thr	Val	Arg	Arg	Glu	Thr	Gln	Thr	

365

370

375

Ser Cys Phe Cys Asn His Leu Thr Tyr Phe Ala Val Leu Met Val  
380 385 390

Ser Ser Val Glu Val Asp Ala Val His Lys His Tyr Leu Ser Leu  
395 400 405

Leu Ser Tyr Val Gly Cys Val Val Ser Ala Leu Ala Cys Leu Val  
410 415 420

Thr Ile Ala Ala Tyr Leu Cys Ser Arg Val Pro Leu Pro Cys Arg  
425 430 435

Arg Lys Pro Arg Asp Tyr Thr Ile Lys Val His Met Asn Leu Leu  
440 445 450

Leu Ala Val Phe Leu Leu Asp Thr Ser Phe Leu Leu Ser Glu Pro  
455 460 465

Val Ala Leu Thr Gly Ser Glu Ala Gly Cys Arg Ala Ser Ala Ile  
470 475 480

Phe Leu His Phe Ser Leu Leu Thr Cys Leu Ser Trp Met Gly Leu  
485 490 495

Glu Gly Tyr Asn Leu Tyr Arg Leu Val Val Glu Val Phe Gly Thr  
500 505 510

Tyr Val Pro Gly Tyr Leu Leu Lys Leu Ser Ala Met Gly Trp Gly  
515 520 525

Phe Pro Ile Phe Leu Val Thr Leu Val Ala Leu Val Asp Val Asp  
530 535 540

Asn Tyr Gly Pro Ile Ile Leu Ala Val His Arg Thr Pro Glu Gly  
545 550 555

Val Ile Tyr Pro Ser Met Cys Trp Ile Arg Asp Ser Leu Val Ser  
560 565 570

Tyr Ile Thr Asn Leu Gly Leu Phe Ser Leu Val Phe Leu Phe Asn  
575 580 585

Met Ala Met Leu Ala Thr Met Val Val Gln Ile Leu Arg Leu Arg  
590 595 600

Pro His Thr Gln Lys Trp Ser His Val Leu Thr Leu Leu Gly Leu  
605 610 615

Ser Leu Val Leu Gly Leu Pro Trp Ala Leu Ile Phe Phe Ser Phe  
620 625 630

Ala Ser Gly Thr Phe Gln Leu Val Val Leu Tyr Leu Phe Ser Ile  
635 640 645

Ile Thr Ser Phe Gln Gly Phe Leu Ile Phe Ile Trp Tyr Trp Ser  
650 655 660

345

365 370 375 380 385 390 395 400 405 410 415 420 425 430 435 440 445 450 455 460 465 470 475 480 485 490 495 500 505 510 515 520 525 530 535 540 545 550 555 560 565 570 575 580 585 590 595 600 605 610 615 620 625 630 635 640 645 650 655 660

Met Arg Leu Gln Ala Arg Gly Gly Pro Ser Pro Leu Lys Ser Asn  
665 670 675

Ser Asp Ser Ala Arg Leu Pro Ile Ser Ser Gly Ser Thr Ser Ser  
680 685 690

Ser Arg Ile

<210> 484  
<211> 516  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 68, 70, 84, 147  
<223> unknown base

<400> 484  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 485  
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<210> 486  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 486  
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<210> 487  
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<212> DNA  
<213> Homo sapiens

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<221> unsure  
<222> 2715  
<223> unknown base

<400> 487  
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<210> 488

<211> 345

<212> PRT

<213> Homo sapiens

<400> 488

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Gln	Arg	Gln	Gly	Thr	Gln	Ala	Glu	Ser	Asn	Leu	Ser	Ser	Lys	Phe	
				20					25					30	
Gln	Phe	Ser	Ser	Asn	Lys	Glu	Gln	Asn	Gly	Val	Gln	Asp	Pro	Gln	
				35					40					45	
His	Glu	Arg	Ile	Ile	Thr	Val	Ser	Thr	Asn	Gly	Ser	Ile	His	Ser	
				50					55					60	
Pro	Arg	Phe	Pro	His	Thr	Tyr	Pro	Arg	Asn	Thr	Val	Leu	Val	Trp	
				65					70					75	
Arg	Leu	Val	Ala	Val	Glu	Glu	Asn	Val	Trp	Ile	Gln	Leu	Thr	Phe	
				80					85					90	
Asp	Glu	Arg	Phe	Gly	Leu	Glu	Asp	Pro	Glu	Asp	Asp	Ile	Cys	Lys	
				95					100					105	
Tyr	Asp	Phe	Val	Glu	Val	Glu	Glu	Pro	Ser	Asp	Gly	Thr	Ile	Leu	
				110					115					120	
Gly	Arg	Trp	Cys	Gly	Ser	Gly	Thr	Val	Pro	Gly	Lys	Gln	Ile	Ser	
				125					130					135	
Lys	Gly	Asn	Gln	Ile	Arg	Ile	Arg	Phe	Val	Ser	Asp	Glu	Tyr	Phe	
				140					145					150	
Pro	Ser	Glu	Pro	Gly	Phe	Cys	Ile	His	Tyr	Asn	Ile	Val	Met	Pro	
				155					160					165	
Gln	Phe	Thr	Glu	Ala	Val	Ser	Pro	Ser	Val	Leu	Pro	Pro	Ser	Ala	
				170					175					180	
Leu	Pro	Leu	Asp	Leu	Leu	Asn	Asn	Ala	Ile	Thr	Ala	Phe	Ser	Thr	
				185					190					195	

Leu	Glu	Asp	Leu	Ile	Arg	Tyr	Leu	Glu	Pro	Glu	Arg	Trp	Gln	Leu
				200					205				210	
Asp	Leu	Glu	Asp	Leu	Tyr	Arg	Pro	Thr	Trp	Gln	Leu	Leu	Gly	Lys
				215					220					225
Ala	Phe	Val	Phe	Gly	Arg	Lys	Ser	Arg	Val	Val	Asp	Leu	Asn	Leu
				230					235					240
Leu	Thr	Glu	Glu	Val	Arg	Leu	Tyr	Ser	Cys	Thr	Pro	Arg	Asn	Phe
				245					250					255
Ser	Val	Ser	Ile	Arg	Glu	Glu	Leu	Lys	Arg	Thr	Asp	Thr	Ile	Phe
				260					265					270
Trp	Pro	Gly	Cys	Leu	Leu	Val	Lys	Arg	Cys	Gly	Gly	Asn	Cys	Ala
				275					280					285
Cys	Cys	Leu	His	Asn	Cys	Asn	Glu	Cys	Gln	Cys	Val	Pro	Ser	Lys
				290					295					300
Val	Thr	Lys	Lys	Tyr	His	Glu	Val	Leu	Gln	Leu	Arg	Pro	Lys	Thr
				305					310					315
Gly	Val	Arg	Gly	Leu	His	Lys	Ser	Leu	Thr	Asp	Val	Ala	Leu	Glu
				320					325					330
His	His	Glu	Glu	Cys	Asp	Cys	Val	Cys	Arg	Gly	Ser	Thr	Gly	Gly
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<210> 489  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 489  
 acttctcagt gtccataagg g 21

<210> 490  
 <211> 40  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 490  
 gaactaaaga gaaccgatac cattttctgg ccaggttgtc 40

<210> 491  
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 <212> DNA  
 <213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 491  
caccacagcg tttaaccagg 20

<210> 492  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 492  
acaacaggca cagttccac 20

<210> 493  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 493  
ggcggaatcc aacctgagta g 21

<210> 494  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 494  
gcggctatcc tcctgtgctc 20

<210> 495  
<211> 3283  
<212> DNA  
<213> Homo sapiens

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gacctctaca ttccatcttg gaagaagact aaaaatgggtg tttccaatgt 100  
ggacactgaa gagacaaatt cttatccttt ttaacataat cctaatttcc 150  
aaactccttg gggctagatg gtttcctaaa actctgccct gtgatgtcac 200  
tctggatgtt ccaaagaacc atgtgatcgt ggactgcaca gacaagcatt 250  
tgacagaaat tcctggaggt attcccacga acaccacgaa cctcaccctc 300  
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acaactgcct agtttaccaa ggagaggcct ggc 3283

<210> 496

<211> 1049

<212> PRT

<213> Homo sapiens

<400> 496

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Phe Asn Ile Ile Leu Ile Ser Lys Leu Leu Gly Ala Arg Trp Phe  
20 25 30

Pro Lys Thr Leu Pro Cys Asp Val Thr Leu Asp Val Pro Lys Asn  
35 40 45

His Val Ile Val Asp Cys Thr Asp Lys His Leu Thr Glu Ile Pro  
50 55 60

Gly Gly Ile Pro Thr Asn Thr Thr Asn Leu Thr Leu Thr Ile Asn  
65 70 75

His Ile Pro Asp Ile Ser Pro Ala Ser Phe His Arg Leu Asp His  
80 85 90

Leu Val Glu Ile Asp Phe Arg Cys Asn Cys Val Pro Ile Pro Leu  
95 100 105

Gly Ser Lys Asn Asn Met Cys Ile Lys Arg Leu Gln Ile Lys Pro  
110 115 120

Arg Ser Phe Ser Gly Leu Thr Tyr Leu Lys Ser Leu Tyr Leu Asp  
125 130 135

Gly Asn Gln Leu Leu Glu Ile Pro Gln Gly Leu Pro Pro Ser Leu  
140 145 150

Gln Leu Leu Ser Leu Glu Ala Asn Asn Ile Phe Ser Ile Arg Lys  
155 160 165

Glu Asn Leu Thr Glu Leu Ala Asn Ile Glu Ile Leu Tyr Leu Gly  
170 175 180

Gln Asn Cys Tyr Tyr Arg Asn Pro Cys Tyr Val Ser Tyr Ser Ile  
185 190 195

Glu Lys Asp Ala Phe Leu Asn Leu Thr Lys Leu Lys Val Leu Ser  
200 205 210

Leu Lys Asp Asn Asn Val Thr Ala Val Pro Thr Val Leu Pro Ser  
215 220 225

Thr Leu Thr Glu Leu Tyr Leu Tyr Asn Asn Met Ile Ala Lys Ile  
230 235 240

Gln Glu Asp Asp Phe Asn Asn Leu Asn Gln Leu Gln Ile Leu Asp  
245 250 255







Ile	Leu	Phe	Ser	Leu	Ser	Ile	Ser	Val	Ser	Leu	Phe	Leu	Met	Val	845	850	855
Met	Met	Thr	Ala	Ser	His	Leu	Tyr	Phe	Trp	Asp	Val	Trp	Tyr	Ile	860	865	870
Tyr	His	Phe	Cys	Lys	Ala	Lys	Ile	Lys	Gly	Tyr	Gln	Arg	Leu	Ile	875	880	885
Ser	Pro	Asp	Cys	Cys	Tyr	Asp	Ala	Phe	Ile	Val	Tyr	Asp	Thr	Lys	890	895	900
Asp	Pro	Ala	Val	Thr	Glu	Trp	Val	Leu	Ala	Glu	Leu	Val	Ala	Lys	905	910	915
Leu	Glu	Asp	Pro	Arg	Glu	Lys	His	Phe	Asn	Leu	Cys	Leu	Glu	Glu	920	925	930
Arg	Asp	Trp	Leu	Pro	Gly	Gln	Pro	Val	Leu	Glu	Asn	Leu	Ser	Gln	935	940	945
Ser	Ile	Gln	Leu	Ser	Lys	Lys	Thr	Val	Phe	Val	Met	Thr	Asp	Lys	950	955	960
Tyr	Ala	Lys	Thr	Glu	Asn	Phe	Lys	Ile	Ala	Phe	Tyr	Leu	Ser	His	965	970	975
Gln	Arg	Leu	Met	Asp	Glu	Lys	Val	Asp	Val	Ile	Ile	Leu	Ile	Phe	980	985	990
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Arg	Leu	Cys	Gly	Ser	Ser	Val	Leu	Glu	Trp	Pro	Thr	Asn	Pro	Gln	1010	1015	1020
Ala	His	Pro	Tyr	Phe	Trp	Gln	Cys	Leu	Lys	Asn	Ala	Leu	Ala	Thr	1025	1030	1035
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<210> 497  
 <211> 4199  
 <212> DNA  
 <213> Homo sapiens

<400> 497  
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 tgcagcaatc gtcgactaca ggaagttccc caaacggtgg gcaaatatgt 250

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<210> 498  
 <211> 1041  
 <212> PRT  
 <213> Homo sapiens

<400> 498  
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 Leu Leu Ile Ser Gly Ser Cys Glu Leu Cys Ala Glu Glu Asn Phe  
 20 25 30  
 Ser Arg Ser Tyr Pro Cys Asp Glu Lys Lys Gln Asn Asp Ser Val  
 35 40 45  
 Ile Ala Glu Cys Ser Asn Arg Arg Leu Gln Glu Val Pro Gln Thr

005155455 077064

Val Gly Lys Tyr	Val Thr Glu Leu Asp	Leu Ser Asp Asn Phe Ile
65	70	75
Thr His Ile Thr	Asn Glu Ser Phe Gln Gly	Leu Gln Asn Leu Thr
80	85	90
Lys Ile Asn Leu	Asn His Asn Pro Asn	Val Gln His Gln Asn Gly
95	100	105
Asn Pro Gly Ile	Gln Ser Asn Gly Leu	Asn Ile Thr Asp Gly Ala
110	115	120
Phe Leu Asn Leu	Lys Asn Leu Arg Glu	Leu Leu Leu Glu Asp Asn
125	130	135
Gln Leu Pro Gln	Ile Pro Ser Gly Leu	Pro Glu Ser Leu Thr Glu
140	145	150
Leu Ser Leu Ile	Gln Asn Asn Ile Tyr	Asn Ile Thr Lys Glu Gly
155	160	165
Ile Ser Arg Leu	Ile Asn Leu Lys Asn	Leu Tyr Leu Ala Trp Asn
170	175	180
Cys Tyr Phe Asn	Lys Val Cys Glu Lys	Thr Asn Ile Glu Asp Gly
185	190	195
Val Phe Glu Thr	Leu Thr Asn Leu Glu	Leu Leu Ser Leu Ser Phe
200	205	210
Asn Ser Leu Ser	His Val Pro Pro Lys	Leu Pro Ser Ser Leu Arg
215	220	225
Lys Leu Phe Leu	Ser Asn Thr Gln Ile	Lys Tyr Ile Ser Glu Glu
230	235	240
Asp Phe Lys Gly	Leu Ile Asn Leu Thr	Leu Leu Asp Leu Ser Gly
245	250	255
Asn Cys Pro Arg	Cys Phe Asn Ala Pro	Phe Pro Cys Val Pro Cys
260	265	270
Asp Gly Gly Ala	Ser Ile Asn Ile Asp	Arg Phe Ala Phe Gln Asn
275	280	285
Leu Thr Gln Leu	Arg Tyr Leu Asn Leu	Ser Ser Thr Ser Leu Arg
290	295	300
Lys Ile Asn Ala	Ala Trp Phe Lys Asn	Met Pro His Leu Lys Val
305	310	315
Leu Asp Leu Glu	Phe Asn Tyr Leu Val	Gly Glu Ile Val Ser Gly
320	325	330
Ala Phe Leu Thr	Met Leu Pro Arg Leu	Glu Ile Leu Asp Leu Ser
335	340	345

Phe	Asn	Tyr	Ile	Lys	Gly	Ser	Tyr	Pro	Gln	His	Ile	Asn	Ile	Ser	
				350					355					360	
Arg	Asn	Phe	Ser	Lys	Leu	Leu	Ser	Leu	Arg	Ala	Leu	His	Leu	Arg	
				365					370					375	
Gly	Tyr	Val	Phe	Gln	Glu	Leu	Arg	Glu	Asp	Asp	Phe	Gln	Pro	Leu	
				380					385					390	
Met	Gln	Leu	Pro	Asn	Leu	Ser	Thr	Ile	Asn	Leu	Gly	Ile	Asn	Phe	
				395					400					405	
Ile	Lys	Gln	Ile	Asp	Phe	Lys	Leu	Phe	Gln	Asn	Phe	Ser	Asn	Leu	
				410					415					420	
Glu	Ile	Ile	Tyr	Leu	Ser	Glu	Asn	Arg	Ile	Ser	Pro	Leu	Val	Lys	
				425					430					435	
Asp	Thr	Arg	Gln	Ser	Tyr	Ala	Asn	Ser	Ser	Ser	Phe	Gln	Arg	His	
				440					445					450	
Ile	Arg	Lys	Arg	Arg	Ser	Thr	Asp	Phe	Glu	Phe	Asp	Pro	His	Ser	
				455					460					465	
Asn	Phe	Tyr	His	Phe	Thr	Arg	Pro	Leu	Ile	Lys	Pro	Gln	Cys	Ala	
				470					475					480	
Ala	Tyr	Gly	Lys	Ala	Leu	Asp	Leu	Ser	Leu	Asn	Ser	Ile	Phe	Phe	
				485					490					495	
Ile	Gly	Pro	Asn	Gln	Phe	Glu	Asn	Leu	Pro	Asp	Ile	Ala	Cys	Leu	
				500					505					510	
Asn	Leu	Ser	Ala	Asn	Ser	Asn	Ala	Gln	Val	Leu	Ser	Gly	Thr	Glu	
				515					520					525	
Phe	Ser	Ala	Ile	Pro	His	Val	Lys	Tyr	Leu	Asp	Leu	Thr	Asn	Asn	
				530					535					540	
Arg	Leu	Asp	Phe	Asp	Asn	Ala	Ser	Ala	Leu	Thr	Glu	Leu	Ser	Asp	
				545					550					555	
Leu	Glu	Val	Leu	Asp	Leu	Ser	Tyr	Asn	Ser	His	Tyr	Phe	Arg	Ile	
				560					565					570	
Ala	Gly	Val	Thr	His	His	Leu	Glu	Phe	Ile	Gln	Asn	Phe	Thr	Asn	
				575					580					585	
Leu	Lys	Val	Leu	Asn	Leu	Ser	His	Asn	Asn	Ile	Tyr	Thr	Leu	Thr	
				590					595					600	
Asp	Lys	Tyr	Asn	Leu	Glu	Ser	Lys	Ser	Leu	Val	Glu	Leu	Val	Phe	
				605					610					615	
Ser	Gly	Asn	Arg	Leu	Asp	Ile	Leu	Trp	Asn	Asp	Asp	Asp	Asn	Arg	
				620					625					630	
Tyr	Ile	Ser	Ile	Phe	Lys	Gly	Leu	Lys	Asn	Leu	Thr	Arg	Leu	Asp	



Asn Leu Met Gln Ser Ile Asn Gln Ser Lys Lys Thr Val Phe Val  
 935 940 945  
 Leu Thr Lys Lys Tyr Ala Lys Ser Trp Asn Phe Lys Thr Ala Phe  
 950 955 960  
 Tyr Leu Ala Leu Gln Arg Leu Met Asp Glu Asn Met Asp Val Ile  
 965 970 975  
 Ile Phe Ile Leu Leu Glu Pro Val Leu Gln His Ser Gln Tyr Leu  
 980 985 990  
 Arg Leu Arg Gln Arg Ile Cys Lys Ser Ser Ile Leu Gln Trp Pro  
 995 1000 1005  
 Asp Asn Pro Lys Ala Glu Gly Leu Phe Trp Gln Thr Leu Arg Asn  
 1010 1015 1020  
 Val Val Leu Thr Glu Asn Asp Ser Arg Tyr Asn Asn Met Tyr Val  
 1025 1030 1035

Asp Ser Ile Lys Gln Tyr  
 1040

<210> 499  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 499  
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 <210> 500  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 500  
 atccatgagc ctctgatggg 20  
  
 <210> 501  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 501  
 atttatgtct cgaggaaagg gactgggttac cagggcagcc agttc 45  
  
 <210> 502



<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 502  
gccgagacaa aaacgttctc c 21

<210> 503  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 503  
catccatggt ctcattccatt agcc 24

<210> 504  
<211> 46  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 504  
tcgacaacct catgcagagc atcaacacaa gcaagaaaac agtatt 46

<210> 505  
<211> 1738  
<212> DNA  
<213> Homo sapiens

<400> 505  
ccaggtccaa ctgcacctcg gttctatcga ttgaattccc cggggatcct 50  
ctagagatcc ctgcacctcg acccacgcgt ccgccaagct ggccctgcac 100  
ggctgcaagg gaggtcctg tggacaggcc aggcaggtgg gcctcaggag 150  
gtgcctccag gcggccagtg ggctgaggc cccagcaagg gctaggggtcc 200  
atctccagtc ccaggacaca gcagcggcca ccatggccac gcctgggctc 250  
cagcagcatc agcagcccc aggaccgggg aggcacaggt ggccccacc 300  
accgggagga gcagtcctg cccctgtccg ggggatgact gattctctc 350  
cgccaggcca cccagaggag aaggccaccc cgcttgagg cacaggccat 400  
gaggggctct caggaggtgc tgcgatgtg gcttctggtg ttggcagtgg 450  
gcggcacaga gcacgcctac cggcccggcc gtaggggtgtg tgctgtccg 500

gctcacgggg accctgtctc cgagtcgttc gtgcagcgtg tgtaccagcc 550  
 cttcctcacc accctgcgacg ggcaccgggc ctgcagcacc taccgaacca 600  
 tctataggac cgcctaccgc cgcagccctg ggctggcccc tgccaggcct 650  
 cgctacgcgt gctgccccgg ctggaagagg accagcgggc ttcttggggc 700  
 ctgtggagca gcaatatgcc agccgccatg ccggaacgga gggagctgtg 750  
 tccagcctgg ccgctgccgc tgccctgcag gatggcgggg tgacacttgc 800  
 cagtcagatg tggatgaatg cagtgcctagg aggggcggct gtccccagcg 850  
 ctgcatcaac accgccggca gttactgggt ccagtgttgg gaggggcaca 900  
 gcctgtctgc agacggtaca ctctgtgtgc ccaagggagg gccccccagg 950  
 gtggccccca acccgacagg agtggacagt gcaatgaagg aagaagtgca 1000  
 gaggtgcag tccaggggtg accctgctgga ggagaagctg cagctgggtg 1050  
 tggccccact gcacagcctg gcctcgcagg cactggagca tgggctcccc 1100  
 gaccccgga gcctcctggt gcactccttc cagcagctcg gccgcacga 1150  
 ctccctgagc gagcagattt ccttcttga ggagcagctg gggctctgct 1200  
 cctgcaagaa agactcgtga ctgcccagcg ccccaggctg gactgagccc 1250  
 ctcacgccgc cctgcagccc ccatgcccct gcccaacatg ctgggggtcc 1300  
 agaagccacc tcggggtgac tgagcggaa ggcaggcagg gccttctctc 1350  
 tcttctctc ccccttctc gggaggctcc ccagaccctg gcatgggatg 1400  
 ggctgggatc ttctctgtga atccaccct ggctaccccc accctggcta 1450  
 ccccaacggc atcccaaggc cagggtgggc ctcagctgag ggaaggtag 1500  
 agctccctgc tggagcctgg gacccatggc acaggccagg cagcccggag 1550  
 gctgggtggg gcctcagtgg gggctgctgc ctgaccccc gcacaataaa 1600  
 aatgaaacgt gaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1650  
 aaagggcggc cgcgactcta gagtcgacct gcagaagctt ggccgccatg 1700  
 gcccaacttg tttattgcag cttataatgg ttacaaat 1738

<210> 506  
 <211> 273  
 <212> PRT  
 <213> Homo sapiens

<400> 506  
 Met Arg Gly Ser Gln Glu Val Leu Leu Met Trp Leu Leu Val Leu  
 1 5 10 15

Ala	Val	Gly	Gly	Thr	Glu	His	Ala	Tyr	Arg	Pro	Gly	Arg	Arg	Val	20	25	30
Cys	Ala	Val	Arg	Ala	His	Gly	Asp	Pro	Val	Ser	Glu	Ser	Phe	Val	35	40	45
Gln	Arg	Val	Tyr	Gln	Pro	Phe	Leu	Thr	Thr	Cys	Asp	Gly	His	Arg	50	55	60
Ala	Cys	Ser	Thr	Tyr	Arg	Thr	Ile	Tyr	Arg	Thr	Ala	Tyr	Arg	Arg	65	70	75
Ser	Pro	Gly	Leu	Ala	Pro	Ala	Arg	Pro	Arg	Tyr	Ala	Cys	Cys	Pro	80	85	90
Gly	Trp	Lys	Arg	Thr	Ser	Gly	Leu	Pro	Gly	Ala	Cys	Gly	Ala	Ala	95	100	105
Ile	Cys	Gln	Pro	Pro	Cys	Arg	Asn	Gly	Gly	Ser	Cys	Val	Gln	Pro	110	115	120
Gly	Arg	Cys	Arg	Cys	Pro	Ala	Gly	Trp	Arg	Gly	Asp	Thr	Cys	Gln	125	130	135
Ser	Asp	Val	Asp	Glu	Cys	Ser	Ala	Arg	Arg	Gly	Gly	Cys	Pro	Gln	140	145	150
Arg	Cys	Ile	Asn	Thr	Ala	Gly	Ser	Tyr	Trp	Cys	Gln	Cys	Trp	Glu	155	160	165
Gly	His	Ser	Leu	Ser	Ala	Asp	Gly	Thr	Leu	Cys	Val	Pro	Lys	Gly	170	175	180
Gly	Pro	Pro	Arg	Val	Ala	Pro	Asn	Pro	Thr	Gly	Val	Asp	Ser	Ala	185	190	195
Met	Lys	Glu	Glu	Val	Gln	Arg	Leu	Gln	Ser	Arg	Val	Asp	Leu	Leu	200	205	210
Glu	Glu	Lys	Leu	Gln	Leu	Val	Leu	Ala	Pro	Leu	His	Ser	Leu	Ala	215	220	225
Ser	Gln	Ala	Leu	Glu	His	Gly	Leu	Pro	Asp	Pro	Gly	Ser	Leu	Leu	230	235	240
Val	His	Ser	Phe	Gln	Gln	Leu	Gly	Arg	Ile	Asp	Ser	Leu	Ser	Glu	245	250	255
Gln	Ile	Ser	Phe	Leu	Glu	Glu	Gln	Leu	Gly	Ser	Cys	Ser	Cys	Lys	260	265	270

Lys Asp Ser

<210> 507  
 <211> 1700  
 <212> DNA  
 <213> Homo sapiens

<400> 507

gccaggcagg tgggcctcag gaggtgcctc caggcggcca gtgggcctga 50  
ggccccagca agggctaggg tccatctcca gtcccaggac acagcagcgg 100  
ccaccatggc cacgcctggg ctccagcagc atcagagcag cccctgtggt 150  
tggcagcaaa gttcagcttg gctgggcccg ctgtgagggg cttcgcgcta 200  
cgccctgcgg tgtcccagg gctgaggtct cctcatcttc tccctagcag 250  
tggatgagca acccaacggg ggcccgggga ggggaactgg ccccgaggga 300  
gaggaacccc aaagccacat ctgtagccag gatgagcagt gtgaatccag 350  
gcagccccca ggaccgggga ggcacagggtg gccccacca cccggaggag 400  
cagctcctgc ccctgtccgg gggatgactg attctcctcc gccaggccac 450  
ccagaggaga aggccacccc gcctggaggc acaggccatg aggggctctc 500  
aggaggtgct gctgatgtgg cttctggtgt tggcagtggg cggcacagag 550  
cacgcctacc ggcccggccg tagggtgtgt gctgtccggg ctcacgggga 600  
ccctgtctcc gagtcgttcg tgcagcgtgt gtaccagccc ttcctcacca 650  
cctgcgacgg gcaccgggcc tgcagcacct accgaaccat ctataggacc 700  
gcctaccgcc gcagccctgg gctggcccct gccaggcctc gctacgcgtg 750  
ctgccccggc tggaagagga ccagcgggct tcctggggcc tgtggagcag 800  
caatatgcca gccgccatgc cggaacggag ggagctgtgt ccagcctggc 850  
cgctgccgct gccctgcagg atggcggggg gacacttgcc agtcagatgt 900  
ggatgaatgc agtgctagga ggggcggctg tccccagcgc tgcataca 950  
ccgccggcag ttactggtgc cagtgttggg aggggcacag cctgtctgca 1000  
gacggtacac tctgtgtgcc caaggaggag cccccaggg tggcccccaa 1050  
cccagacagga gtggacagtg caatgaagga agaagtgcag aggctgcagt 1100  
ccagggtgga cctgctggag gagaagctgc agctggtgct ggccccactg 1150  
cacagcctgg cctcgcaggc actggagcat gggctcccgg accccggcag 1200  
cctcctggtg cactccttcc agcagctcgg ccgcatcgac tccctgagcg 1250  
agcagatttc cttcctggag gagcagctgg ggtcctgctc ctgcaagaaa 1300  
gactcgtgac tgcccagcgc tccaggctgg actgagcccc tcacgccgcc 1350  
ctgcagcccc catgcccctg cccaacatgc tgggggtcca gaagccacct 1400  
cggggtgact gagcggaagg ccaggcaggg ccttcctcct cttcctcctc 1450

cccttcctcg ggaggetccc cagaccctgg catgggatgg gctgggatct 1500  
tctctgtgaa tccaccctg gctaccccca cctgggtac cccaacggca 1550  
tcccaaggcc aggtggaccc tcagctgagg gaaggtacga gctccctgct 1600  
ggagcctggg acccatggca caggccaggc agcccggagg ctgggtgggg 1650  
cctcagtggg ggctgctgcc tgacccccag cacaataaaa atgaaacgtg 1700

<210> 508  
<211> 273  
<212> PRT  
<213> Homo sapiens

<400> 508  
Met Arg Gly Ser Gln Glu Val Leu Leu Met Trp Leu Leu Val Leu  
1 5 10 15  
Ala Val Gly Gly Thr Glu His Ala Tyr Arg Pro Gly Arg Arg Val  
20 25 30  
Cys Ala Val Arg Ala His Gly Asp Pro Val Ser Glu Ser Phe Val  
35 40 45  
Gln Arg Val Tyr Gln Pro Phe Leu Thr Thr Cys Asp Gly His Arg  
50 55 60  
Ala Cys Ser Thr Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg  
65 70 75  
Ser Pro Gly Leu Ala Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro  
80 85 90  
Gly Trp Lys Arg Thr Ser Gly Leu Pro Gly Ala Cys Gly Ala Ala  
95 100 105  
Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly Ser Cys Val Gln Pro  
110 115 120  
Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly Asp Thr Cys Gln  
125 130 135  
Ser Asp Val Asp Glu Cys Ser Ala Arg Arg Gly Gly Cys Pro Gln  
140 145 150  
Arg Cys Ile Asn Thr Ala Gly Ser Tyr Trp Cys Gln Cys Trp Glu  
155 160 165  
Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys Val Pro Lys Gly  
170 175 180  
Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly Val Asp Ser Ala  
185 190 195  
Met Lys Glu Glu Val Gln Arg Leu Gln Ser Arg Val Asp Leu Leu  
200 205 210

Glu	Glu	Lys	Leu	Gln	Leu	Val	Leu	Ala	Pro	Leu	His	Ser	Leu	Ala
				215					220					225
Ser	Gln	Ala	Leu	Glu	His	Gly	Leu	Pro	Asp	Pro	Gly	Ser	Leu	Leu
				230					235					240
Val	His	Ser	Phe	Gln	Gln	Leu	Gly	Arg	Ile	Asp	Ser	Leu	Ser	Glu
				245					250					255
Gln	Ile	Ser	Phe	Leu	Glu	Glu	Gln	Leu	Gly	Ser	Cys	Ser	Cys	Lys
				260					265					270

Lys Asp Ser

<210> 509  
 <211> 1538  
 <212> DNA  
 <213> Homo sapiens

<400> 509  
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 acaggccagg caggtgggccc tcaggagggtg cctccaggcg gccagtgggc 100  
 ctgaggcccc agcaagggct agggctccatc tccagtccca ggacacagca 150  
 gcggccacca tggccacgcc tgggctccag cagcatcagc agccccagg 200  
 accggggagg cacaggtggc ccccaccacc cggaggagca gctcctgccc 250  
 ctgtccgggg gatgactgat tctcctccgc caggccaccc agaggagaag 300  
 gccaccccgc ctggaggcac aggccatgag gggctctcag gaggtgctgc 350  
 tgatgtggct tctggtgttg gcagtgggcg gcacagagca cgcctaccgg 400  
 cccggccgta ggggtgtgtgc tgtccgggct cacggggacc ctgtctccga 450  
 gtcgttcgtg cagcgtgtgt accagccctt cctcaccacc tgcgacgggc 500  
 accgggacctg cagcacctac cgaaccatct ataggaccgc ctaccgccgc 550  
 agccctgggc tggccctgc caggcctcgc tacgcgtgct gccccggctg 600  
 gaagaggacc agcgggcttc ctggggcctg tggagcagca atatgccagc 650  
 cgccatgccg gaacggaggg agctgtgtcc agcctggccg ctgccgctgc 700  
 cctgcaggat ggcgggtga cacttgccag tcagatgtgg atgaatgcag 750  
 tgctaggagg ggcggctgtc cccagcgtg cgtcaacacc gccggcagtt 800  
 actggtgcca gtgttgggag gggcacagcc tgtctgcaga cggtagactc 850  
 tgtgtgcca agggagggcc cccaggggtg gcccccaacc cgacaggagt 900  
 ggacagtgca atgaaggaag aagtgcagag gctgcagtcc agggaggacc 950

tgctggagga gaagctgcag ctggtgctgg cccactgca cagcctggcc 1000  
 tcgcaggcac tggagcatgg gctcccgac cccggcagcc tcctggtgca 1050  
 ctcttccag cagctcggcc gcacgactc cctgagcgag cagatttcct 1100  
 tcctggagga gcagctgggg tcctgctcct gcaagaaaga ctctgactg 1150  
 cccagcgccc caggctggac tgagccctc acgcccct gcagcccca 1200  
 tgcccctgcc caacatgctg ggggtccaga agccacctcg gggtgactga 1250  
 gcggaaggcc aggcaggcc ttctctctt tctctctccc ctctctcggg 1300  
 aggtcccca gacctggca tgggatgggc tgggatcttc tctgtgaatc 1350  
 caccctggc taccaccacc ctggctaccc caacggcatc ccaaggccag 1400  
 gtgggcccctc agctgagga aggtacgagc tccctgctgg agcctgggac 1450  
 ccatggcaca ggccaggcag cccggaggct ggggtggggcc tcagtggggg 1500

ctgctgctg accccagca caataaaaat gaaacgtg 1538

<210> 510

<211> 273

<212> PRT

<213> Homo sapiens

<400> 510

Met	Arg	Gly	Ser	Gln	Glu	Val	Leu	Leu	Met	Trp	Leu	Leu	Val	Leu
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Ala	Val	Gly	Gly	Thr	Glu	His	Ala	Tyr	Arg	Pro	Gly	Arg	Arg	Val
				20					25					30

Cys	Ala	Val	Arg	Ala	His	Gly	Asp	Pro	Val	Ser	Glu	Ser	Phe	Val
				35					40					45

Gln	Arg	Val	Tyr	Gln	Pro	Phe	Leu	Thr	Thr	Cys	Asp	Gly	His	Arg
				50					55					60

Ala	Cys	Ser	Thr	Tyr	Arg	Thr	Ile	Tyr	Arg	Thr	Ala	Tyr	Arg	Arg
				65					70					75

Ser	Pro	Gly	Leu	Ala	Pro	Ala	Arg	Pro	Arg	Tyr	Ala	Cys	Cys	Pro
				80					85					90

Gly	Trp	Lys	Arg	Thr	Ser	Gly	Leu	Pro	Gly	Ala	Cys	Gly	Ala	Ala
				95					100					105

Ile	Cys	Gln	Pro	Pro	Cys	Arg	Asn	Gly	Gly	Ser	Cys	Val	Gln	Pro
				110					115					120

Gly	Arg	Cys	Arg	Cys	Pro	Ala	Gly	Trp	Arg	Gly	Asp	Thr	Cys	Gln
				125					130					135

Ser Asp Val Asp Glu Cys Ser Ala Arg Arg Gly Gly Cys Pro Gln

140	145	150
Arg Cys Val Asn Thr Ala Gly Ser Tyr Trp Cys Gln Cys Trp Glu		
155	160	165
Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys Val Pro Lys Gly		
170	175	180
Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly Val Asp Ser Ala		
185	190	195
Met Lys Glu Glu Val Gln Arg Leu Gln Ser Arg Val Asp Leu Leu		
200	205	210
Glu Glu Lys Leu Gln Leu Val Leu Ala Pro Leu His Ser Leu Ala		
215	220	225
Ser Gln Ala Leu Glu His Gly Leu Pro Asp Pro Gly Ser Leu Leu		
230	235	240
Val His Ser Phe Gln Gln Leu Gly Arg Ile Asp Ser Leu Ser Glu		
245	250	255
Gln Ile Ser Phe Leu Glu Glu Gln Leu Gly Ser Cys Ser Cys Lys		
260	265	270
Lys Asp Ser		

<210> 511  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 511  
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 <210> 512  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 512  
 ttttcactc ctgtcgggtt gg 22  
  
 <210> 513  
 <211> 46  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe



<400> 513  
ggtgacactt gccagtcaga tgtggatgaa tgcagtgcta ggaggg 46

<210> 514  
<211> 2690  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 2039-2065  
<223> unknown base

<400> 514  
ggttgccaca gctggtttag ggccccgacc actggggccc cttgtcagga 50  
ggagacagcc tcccggcccc gggaggacaa gtcgctgcca cctttggctg 100  
ccgacgtgat tccttgggac ggtccgtttc ctgccgtcag ctgccggccg 150  
agttgggtct cctgttttca ggccggctcc cccttctctg tctcccttct 200  
cccgtggtgc cgttttatcg ggaggagatt gtcttcagg gctagcaatt 250  
ggacttttga tgatgtttga ccagcggca ggaatagcag gcaacgtgat 300  
ttcaaagctg ggctcagcct ctgtttcttc tctcgtgtaa tcgcaaaacc 350  
cattttggag caggaattcc aatcatgtct gtgatgggtg tgagaaagaa 400  
ggtgacacgg aaatgggaga aactcccagg caggaacacc ttttgctgtg 450  
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gtgattcctc gggcgctacc agatgaagca gctttcatag aaatggagat 700  
agaagctacc aatggtgcgg tgccccaggg ccagcgacca ccgcctcgta 750  
tcaagaattt ccagataaac aaccagattg tgaaactgaa atactgttac 800  
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<212> PRT  
<213> Homo sapiens

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35 40 45  
Leu Gly Thr Cys Thr Leu Phe Phe Ala Phe Glu Cys Arg Tyr Leu  
50 55 60  
Ala Val Gln Leu Ser Pro Ala Ile Pro Val Phe Ala Ala Met Leu  
65 70 75  
Phe Leu Phe Ser Met Ala Thr Leu Leu Arg Thr Ser Phe Ser Asp  
80 85 90  
Pro Gly Val Ile Pro Arg Ala Leu Pro Asp Glu Ala Ala Phe Ile  
95 100 105  
Glu Met Glu Ile Glu Ala Thr Asn Gly Ala Val Pro Gln Gly Gln  
110 115 120  
Arg Pro Pro Pro Arg Ile Lys Asn Phe Gln Ile Asn Asn Gln Ile  
125 130 135  
Val Lys Leu Lys Tyr Cys Tyr Thr Cys Lys Ile Phe Arg Pro Pro  
140 145 150  
Arg Ala Ser His Cys Ser Ile Cys Asp Asn Cys Val Glu Arg Phe  
155 160 165  
Asp His His Cys Pro Trp Val Gly Asn Cys Val Gly Lys Arg Asn  
170 175 180  
Tyr Arg Tyr Phe Tyr Leu Phe Ile Leu Ser Leu Ser Leu Leu Thr  
185 190 195  
Ile Tyr Val Phe Ala Phe Asn Ile Val Tyr Val Ala Leu Lys Ser  
200 205 210  
Leu Lys Ile Gly Phe Leu Glu Thr Leu Lys Glu Thr Pro Gly Thr  
215 220 225  
Val Leu Glu Val Leu Ile Cys Phe Phe Thr Leu Trp Ser Val Val

230		235		240
Gly Leu Thr Gly Phe His Thr Phe Leu Val Ala Leu Asn Gln Thr				
245		250		255
Thr Asn Glu Asp Ile Lys Gly Ser Trp Thr Gly Lys Asn Arg Val				
260		265		270
Gln Asn Pro Tyr Ser His Gly Asn Ile Val Lys Asn Cys Cys Glu				
275		280		285
Val Leu Cys Gly Pro Leu Pro Pro Ser Val Leu Asp Arg Arg Gly				
290		295		300
Ile Leu Pro Leu Glu Glu Ser Gly Ser Arg Pro Pro Ser Thr Gln				
305		310		315
Glu Thr Ser Ser Ser Leu Leu Pro Gln Ser Pro Ala Pro Thr Glu				
320		325		330
His Leu Asn Ser Asn Glu Met Pro Glu Asp Ser Ser Thr Pro Glu				
335		340		345
Glu Met Pro Pro Pro Glu Pro Pro Glu Pro Pro Gln Glu Ala Ala				
350		355		360
Glu Ala Glu Lys				

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 <211> 255  
 <212> DNA  
 <213> Homo sapiens

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 <221> unsure  
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 <223> unknown base

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 tttggcctttg gactctcnct ttctcccaca gagcncttcg accatcactg 150  
 cccctgggtg gggaattgtg ttggaaagag gaactaccgc tantttotacc 200  
 tcttcatcct ttntctctcc cncctcaciaa tctatgtctt cgccttcaac 250  
 atcgt 255

<210> 517  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 517

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<210> 518

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 518

gcctcgtatc aagaatttcc 20

<210> 519

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 519

agtggaagtc gacctccc 18

<210> 520

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 520

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<210> 521

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 521

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<210> 522

<211> 1679

<212> DNA

<213> Homo sapiens

<400> 522

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caaaaaagaa gaaaaagaag aagaaaaaaa atcatgaaaa ccatccagcc 150  
aaaaatgcac aattctatct cttgggcaat cttcacgggg ctggctgctc 200  
tgtgtctctt ccaaggagtg cccgtgcgca gcggagatgc caccttcccc 250  
aaagctatgg acaacgtgac ggtccggcag ggggagagcg ccaccctcag 300  
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caaagacctc tagggtccac ctcatgtgac aagtatctcc caaaattgta 550  
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catacatttc agaagccaag ggtacaggtg tccccgtggg aaaaaggggg 850  
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caatcagata tatacaaatg aaattagaag aaacacagcc tcatgggaca 1300  
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<210> 523

<211> 344

<212> PRT

<213> Homo sapiens

<400> 523

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Ile	Phe	Thr	Gly	Leu	Ala	Ala	Leu	Cys	Leu	Phe	Gln	Gly	Val	Pro	
				20					25					30	
Val	Arg	Ser	Gly	Asp	Ala	Thr	Phe	Pro	Lys	Ala	Met	Asp	Asn	Val	
				35					40					45	
Thr	Val	Arg	Gln	Gly	Glu	Ser	Ala	Thr	Leu	Arg	Cys	Thr	Ile	Asp	
				50					55					60	
Asn	Arg	Val	Thr	Arg	Val	Ala	Trp	Leu	Asn	Arg	Ser	Thr	Ile	Leu	
				65					70					75	
Tyr	Ala	Gly	Asn	Asp	Lys	Trp	Cys	Leu	Asp	Pro	Arg	Val	Val	Leu	
				80					85					90	
Leu	Ser	Asn	Thr	Gln	Thr	Gln	Tyr	Ser	Ile	Glu	Ile	Gln	Asn	Val	
				95					100					105	
Asp	Val	Tyr	Asp	Glu	Gly	Pro	Tyr	Thr	Cys	Ser	Val	Gln	Thr	Asp	
				110					115					120	
Asn	His	Pro	Lys	Thr	Ser	Arg	Val	His	Leu	Ile	Val	Gln	Val	Ser	
				125					130					135	
Pro	Lys	Ile	Val	Glu	Ile	Ser	Ser	Asp	Ile	Ser	Ile	Asn	Glu	Gly	
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Asn	Asn	Ile	Ser	Leu	Thr	Cys	Ile	Ala	Thr	Gly	Arg	Pro	Glu	Pro	
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Thr	Val	Thr	Trp	Arg	His	Ile	Ser	Pro	Lys	Ala	Val	Gly	Phe	Val	
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Ser	Glu	Asp	Glu	Tyr	Leu	Glu	Ile	Gln	Gly	Ile	Thr	Arg	Glu	Gln	
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Ser	Gly	Asp	Tyr	Glu	Cys	Ser	Ala	Ser	Asn	Asp	Val	Ala	Ala	Pro	
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Val	Val	Arg	Arg	Val	Lys	Val	Thr	Val	Asn	Tyr	Pro	Pro	Tyr	Ile	
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230	235	240
Leu Gln Cys Glu Ala Ser Ala Val Pro Ser Ala Glu Phe Gln Trp		
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Tyr Lys Asp Asp Lys Arg Leu Ile Glu Gly Lys Lys Gly Val Lys		
260	265	270
Val Glu Asn Arg Pro Phe Leu Ser Lys Leu Ile Phe Phe Asn Val		
275	280	285
Ser Glu His Asp Tyr Gly Asn Tyr Thr Cys Val Ala Ser Asn Lys		
290	295	300
Leu Gly His Thr Asn Ala Ser Ile Met Leu Phe Gly Pro Gly Ala		
305	310	315
Val Ser Glu Val Ser Asn Gly Thr Ser Arg Arg Ala Gly Cys Val		
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 <212> DNA  
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 <212> DNA  
 <213> Homo sapiens

<400> 525  
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 <211> 736  
 <212> PRT  
 <213> Homo sapiens

<400> 526  
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 Phe Gln Lys Gly Thr Arg Gln Leu Leu Gly Ser Arg Thr Gln Leu  
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Glu Pro Val Val Val Tyr Gly Met Asp Tyr Leu Gln Gln Val Ser	335		340		345
Glu Leu Ile Asn Arg Thr Glu Pro Ser Ile Leu Asn Asn Tyr Leu	350		355		360
Ile Trp Asn Leu Val Gln Lys Thr Thr Ser Ser Leu Asp Arg Arg	365		370		375
Phe Glu Ser Ala Gln Glu Lys Leu Leu Glu Thr Leu Tyr Gly Thr	380		385		390
Lys Lys Ser Cys Val Pro Arg Trp Gln Thr Cys Ile Ser Asn Thr	395		400		405
Asp Asp Ala Leu Gly Phe Ala Leu Gly Ser Leu Phe Val Lys Ala	410		415		420
Thr Phe Asp Arg Gln Ser Lys Glu Ile Ala Glu Gly Met Ile Ser	425		430		435
Glu Ile Arg Thr Ala Phe Glu Glu Ala Leu Gly Gln Leu Val Trp	440		445		450
Met Asp Glu Lys Thr Arg Gln Ala Ala Lys Glu Lys Ala Asp Ala	455		460		465
Ile Tyr Asp Met Ile Gly Phe Pro Asp Phe Ile Leu Glu Pro Lys	470		475		480
Glu Leu Asp Asp Val Tyr Asp Gly Tyr Glu Ile Ser Glu Asp Ser	485		490		495
Phe Phe Gln Asn Met Leu Asn Leu Tyr Asn Phe Ser Ala Lys Val	500		505		510
Met Ala Asp Gln Leu Arg Lys Pro Pro Ser Arg Asp Gln Trp Ser	515		520		525
Met Thr Pro Gln Thr Val Asn Ala Tyr Tyr Leu Pro Thr Lys Asn	530		535		540
Glu Ile Val Phe Pro Ala Gly Ile Leu Gln Ala Pro Phe Tyr Ala	545		550		555
Arg Asn His Pro Lys Ala Leu Asn Phe Gly Gly Ile Gly Val Val	560		565		570
Met Gly His Glu Leu Thr His Ala Phe Asp Asp Gln Gly Arg Glu	575		580		585
Tyr Asp Lys Glu Gly Asn Leu Arg Pro Trp Trp Gln Asn Glu Ser	590		595		600
Leu Ala Ala Phe Arg Asn His Thr Ala Cys Met Glu Glu Gln Tyr	605		610		615

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Leu	Gly	Glu	Asn	Ile	Thr	Asp	Asn	Gly	Gly	Leu	Lys	Ala	Ala	Tyr
				635					640					645
Asn	Ala	Tyr	Lys	Ala	Trp	Leu	Arg	Lys	His	Gly	Glu	Glu	Gln	Gln
				650					655					660
Leu	Pro	Ala	Val	Gly	Leu	Thr	Asn	His	Gln	Leu	Phe	Phe	Val	Gly
				665					670					675
Phe	Ala	Gln	Val	Trp	Cys	Ser	Val	Arg	Thr	Pro	Glu	Ser	Ser	His
				680					685					690
Glu	Gly	Leu	Val	Thr	Asp	Pro	His	Ser	Pro	Ala	Arg	Phe	Arg	Val
				695					700					705
Leu	Gly	Thr	Leu	Ser	Asn	Ser	Arg	Asp	Phe	Leu	Arg	His	Phe	Gly
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Trp

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 gggcagcccc cggggcgcca cacggcgcca gctgggcagc ggctccagc 450  
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 ccctgaatca ccgcctggcc cgactccacc atgaacgtcg cgctgcagga 150  
 gctgggagct ggcagcaacg tgggattcca gaaggggaca agacagctgt 200  
 taggctcacg cacgcagctg gagctgggtc tagcaggtgc ctctctactg 250  
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 cagagaccca tcccacagca cctgccttac agaggcctgc attcgagtgg 350



ctggaaaaat cctggagtcc ctggaccgag gggtgagccc ctgtgaggac 400  
 ttttaccagt tctcctgtgg gggctggatt cggaggaacc ccctgcccga 450  
 tgggcgttct cgctggaaca ccttcaacag cctctgggac caaaaccagg 500  
 ccatactgaa gcacctgctt gaaaacacca ccttcaactc cagcagtgaa 550  
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 gtggttggaa cattacgggg ccctgggacc aggacaactt tatggagggtg 700  
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 catcagtgcc gactctaaga gttccaacag caatgttatc caggtggacc 800  
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 aatgagaaaag taaggaacat cttccgaacc cccatcccta ccctggctg 900  
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 cgttcagtgt cgatgggttc atggacctag ataggctgat aacaaagctc 1200  
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 tggcatcggg gtgggtcatgg gccatgagtt gacgcatgcc tttgatgacc 150  
 aagggcgcca gtagacaaa gaaggggaacc tgcggccctg gtggcagaat 200  
 gagtccctgg cagccttccg gaaccacacg gcctgcatgg aggaacagta 250  
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<210> 533  
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<210> 542  
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<210> 545  
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cgttcgtgca gcgtgtgta 19

<210> 546  
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<210> 547  
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<211> 23

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<223> Synthetic oligonucleotide probe

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<211> 22

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<210> 563



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<210> 570  
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<210> 573  
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 <210> 576  
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<210> 579  
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<210> 581  
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<210> 583  
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<210> 584  
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<400> 584

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<210> 585

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<210> 586

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<400> 586

ccaggatacg acatgctgca 20

<210> 587

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<210> 588

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<211> 19

<212> DNA

<213> Artificial Sequence

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<223> Synthetic oligonucleotide probe

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gacccggcac cttgctaac 19

<210> 590

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<213> Artificial Sequence

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<400> 590

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<210> 591

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<213> Artificial Sequence

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<400> 591

ttcggcatca tctcttcct ctccc 25

<210> 592

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<223> Synthetic oligonucleotide probe

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<210> 593

<211> 28

<212> DNA

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<223> Synthetic oligonucleotide probe

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 Glu Asp Gly Ala Ser Lys Gly Ala Trp Leu Asn Arg Ser Ser Ile  
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 Val Asp Val Thr Asp Asp Gly Pro Tyr Thr Cys Ser Val Gln Thr  
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 Gln His Thr Pro Arg Thr Met Gln Val His Leu Thr Val Gln Val  
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 170 175 180  
 Glu Asn Gly Gln Tyr Leu Asp Ile Tyr Gly Ile Thr Arg Asp Gln  
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 Ala Gly Glu Tyr Glu Cys Ser Ala Glu Asn Ala Val Ser Phe Pro  
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 Asp Val Arg Lys Val Lys Val Val Val Asn Phe Ala Pro Thr Ile  
 215 220 225  
 Gln Glu Ile Lys Ser Gly Thr Val Thr Pro Gly Arg Ser Gly Leu

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Tyr Lys Gly Glu	Lys Lys Leu Phe Asn	Gly Gln Gln Gly Ile Ile			
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Ile Gln Asn Phe	Ser Thr Arg Ser Ile	Leu Thr Val Thr Asn Val			
	275	280			285
Thr Gln Glu His	Phe Gly Asn Tyr Thr	Cys Val Ala Ala Asn Lys			
	290	295			300
Leu Gly Thr Thr	Asn Ala Ser Leu Pro	Leu Asn Pro Pro Ser Thr			
	305	310			315
Ala Gln Tyr Gly	Ile Thr Gly Ser Ala	Asp Val Leu Phe Ser Cys			
	320	325			330
Trp Tyr Leu Val	Leu Thr Leu Ser Ser	Phe Thr Ser Ile Phe Tyr			
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Leu Lys Asn Ala	Ile Leu Gln				
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<210> 614

<211> 520

<212> PRT

<213> Homo Sapien

<400> 614

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Gly Leu Lys Gly	Ser Lys Gly Asp Thr	Gly Leu Gln Gly Gln Gln			
	350		355		360
Gly Arg Lys Gly	Glu Ser Gly Val Pro	Gly Pro Ala Gly Val Lys			
	365		370		375
Gly Glu Gln Gly	Ser Pro Gly Leu Ala	Gly Pro Lys Gly Ala Pro			
	380		385		390
Gly Gln Ala Gly	Gln Lys Gly Asp Gln	Gly Val Lys Gly Ser Ser			
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Gly Glu Gln Gly	Val Lys Gly Glu Lys	Gly Glu Arg Gly Glu Asn			
	410		415		420
Ser Val Ser Val	Arg Ile Val Gly Ser	Ser Asn Arg Gly Arg Ala			
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Glu Val Tyr Tyr	Ser Gly Thr Trp Gly	Thr Ile Cys Asp Asp Glu			
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Trp Gln Asn Ser	Asp Ala Ile Val Phe	Cys Arg Met Leu Gly Tyr			
	455		460		465
Ser Lys Gly Arg	Ala Leu Tyr Lys Val	Gly Ala Gly Thr Gly Gln			
	470		475		480
Ile Trp Leu Asp	Asn Val Gln Cys Arg	Gly Thr Glu Ser Thr Leu			
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Trp Ser Cys Thr	Lys Asn Ser Trp Gly	His His Asp Cys Ser His			
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<212> DNA

<213> Homo Sapien

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 Lys Ile Leu Lys Asp His Asn Cys His Asn Leu Pro Glu Gly Val  
 35 40 45  
 Ala Asp Leu Thr Gln Ile Asp Val Asn Val Gln Asp His Phe Trp  
 50 55 60  
 Asp Gly Lys Gly Cys Glu Met Ile Cys Tyr Cys Asn Phe Ser Glu  
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 35 40 45  
 Ser Asn Glu Ala Thr Asn Ile Thr Pro Lys His Asn Met Lys Ala  
 50 55 60  
 Phe Leu Asp Glu Leu Lys Ala Glu Asn Ile Lys Lys Phe Leu His  
 65 70 75  
 Asn Phe Thr Gln Ile Pro His Leu Ala Gly Thr Glu Gln Asn Phe  
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Asp	Ser	Val	Glu	Leu	Ala	His	Tyr	Asp	Val	Leu	Leu	Ser	Tyr	Pro
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Asn	Lys	Thr	His	Pro	Asn	Tyr	Ile	Ser	Ile	Ile	Asn	Glu	Asp	Gly
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Asn	Glu	Ile	Phe	Asn	Thr	Ser	Leu	Phe	Glu	Pro	Pro	Pro	Pro	Gly
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Arg	Thr	Glu	Asp	Phe	Phe	Lys	Leu	Glu	Arg	Asp	Met	Lys	Ile	Asn
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Cys	Ser	Gly	Lys	Ile	Val	Ile	Ala	Arg	Tyr	Gly	Lys	Val	Phe	Arg
				200					205					210
Gly	Asn	Lys	Val	Lys	Asn	Ala	Gln	Leu	Ala	Gly	Ala	Lys	Gly	Val
				215					220					225
Ile	Leu	Tyr	Ser	Asp	Pro	Ala	Asp	Tyr	Phe	Ala	Pro	Gly	Val	Lys
				230					235					240
Ser	Tyr	Pro	Asp	Gly	Trp	Asn	Leu	Pro	Gly	Gly	Gly	Val	Gln	Arg
				245					250					255
Gly	Asn	Ile	Leu	Asn	Leu	Asn	Gly	Ala	Gly	Asp	Pro	Leu	Thr	Pro
				260					265					270
Gly	Tyr	Pro	Ala	Asn	Glu	Tyr	Ala	Tyr	Arg	Arg	Gly	Ile	Ala	Glu
				275					280					285
Ala	Val	Gly	Leu	Pro	Ser	Ile	Pro	Val	His	Pro	Ile	Gly	Tyr	Tyr
				290					295					300
Asp	Ala	Gln	Lys	Leu	Leu	Glu	Lys	Met	Gly	Gly	Ser	Ala	Pro	Pro
				305					310					315
Asp	Ser	Ser	Trp	Arg	Gly	Ser	Leu	Lys	Val	Pro	Tyr	Asn	Val	Gly
				320					325					330
Pro	Gly	Phe	Thr	Gly	Asn	Phe	Ser	Thr	Gln	Lys	Val	Lys	Met	His
				335					340					345
Ile	His	Ser	Thr	Asn	Glu	Val	Thr	Arg	Ile	Tyr	Asn	Val	Ile	Gly
				350					355					360
Thr	Leu	Arg	Gly	Ala	Val	Glu	Pro	Asp	Arg	Tyr	Val	Ile	Leu	Gly
				365					370					375
Gly	His	Arg	Asp	Ser	Trp	Val	Phe	Gly	Gly	Ile	Asp	Pro	Gln	Ser



Ile Asp Pro Leu Gly Leu Pro Asp Arg Pro Phe Tyr Arg His Val  
680 685 690

Ile Tyr Ala Pro Ser Ser His Asn Lys Tyr Ala Gly Glu Ser Phe  
695 700 705

Pro Gly Ile Tyr Asp Ala Leu Phe Asp Ile Glu Ser Lys Val Asp  
710 715 720

Pro Ser Lys Ala Trp Gly Glu Val Lys Arg Gln Ile Tyr Val Ala  
725 730 735

Ala Phe Thr Val Gln Ala Ala Ala Glu Thr Leu Ser Glu Val Ala  
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